CITY OF MANASSAS
PUBLIC WORKS – ENGINEERING

PLAN AND PROFILE OF PROPOSED ROUNDABOUT

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT

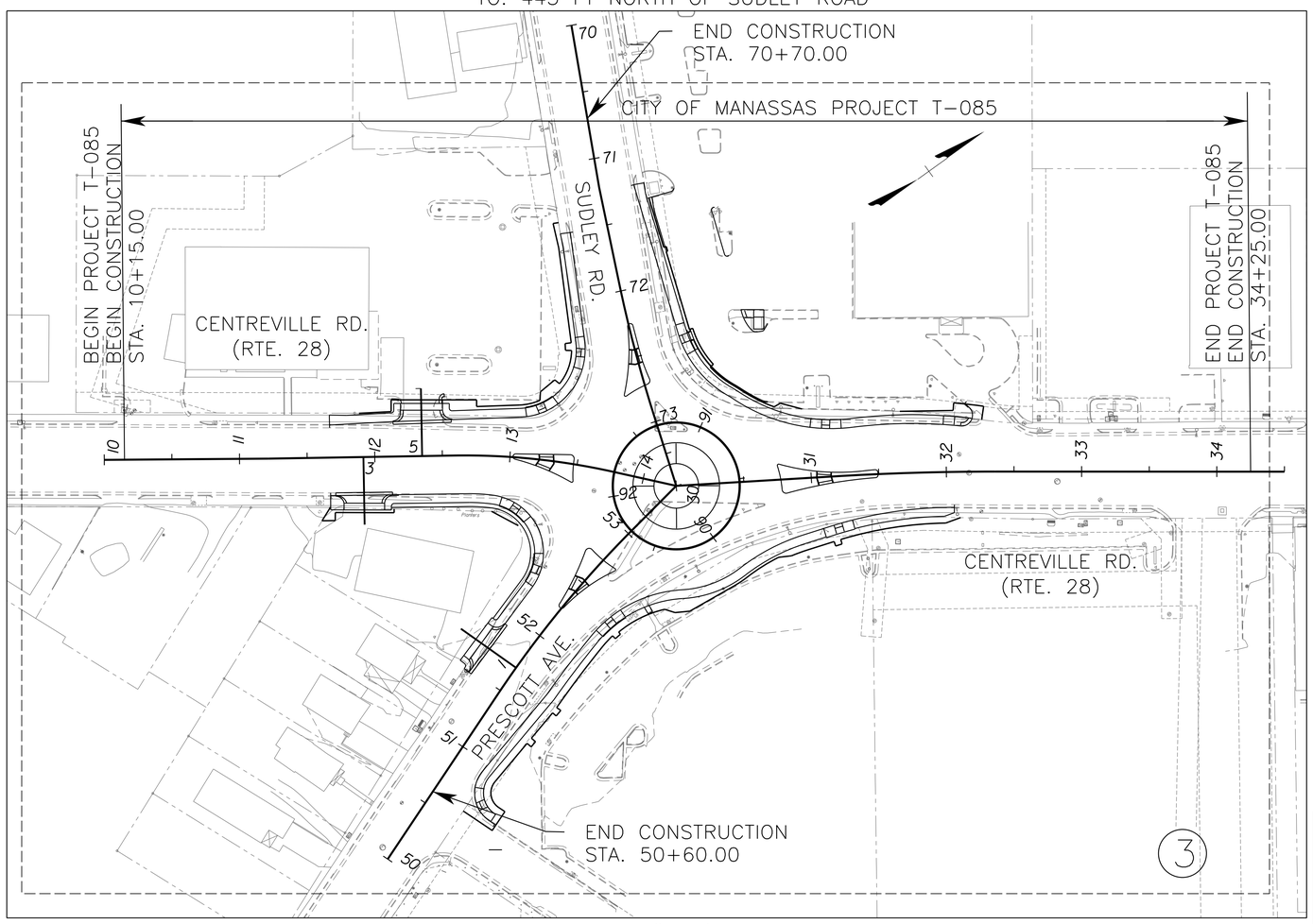
FROM: 375 FT SOUTH OF SUDLEY ROAD
TO: 445 FT NORTH OF SUDLEY ROAD

FUNCTIONAL CLASSIFICATION

ROAD NAME	CENTREVILLE ROAD (ROUTE 28)
FROM:	1SR 28 P, CENTREVILLE RD
TO:	PRINCE WILLIAM COUNTY LINE
STREET CLASS	URBAN PRINCIPAL ARTERIAL (GS-5)
TERRAIN	ROLLING
AADT (2020)	29,000
AADT (2045)	37,191
DHV	2,175
D (%)	52.4%
T (%)	1%
DESIGN V (MPH)	25 MPH
POSTED V (MPH)	25 MPH

ROAD NAME	SUDLEY ROAD (ROUTE 4357)
FROM:	SR 28 CENTREVILLE RD
TO:	BUS R 234 GRANT AVE, SUDLEY RD
STREET CLASS	URBAN MINOR ARTERIAL (GS-6)
TERRAIN	ROLLING
AADT (2020)	16,000
AADT (2045)	20,519
DHV	1,280
D (%)	52.2%
T (%)	2%
DESIGN V (MPH)	25 MPH
POSTED V (MPH)	25 MPH

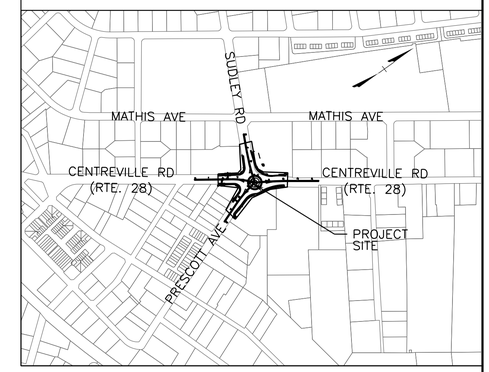
ROAD NAME	PRESCOTT AVENUE (ROUTE 4701)
FROM:	CENTER STREET
TO:	SR 28 CENTREVILLE RD
STREET CLASS	URBAN MINOR ARTERIAL (GS-6)
TERRAIN	ROLLING
AADT (2020)	8,200
AADT (2045)	10,516
DHV	721.6
D (%)	56.6%
T (%)	2%
DESIGN V (MPH)	25 MPH
POSTED V (MPH)	25 MPH



SCALE: 1"=50'

VICINITY MAP

SCALE: 1" = 500'



Responsible Land Disturber (RLD) means an individual holding a certificate of competence issued by DCR who will be in charge of and responsible for carrying out the land-disturbing activity in accordance with the approved plan.
The RLD may be the owner, applicant, permittee, designer, superintendent, project manager, contractor, or any other project or development team member. The RLD must be designated as a prerequisite for obtaining City permit and prior to any land disturbing activities. Ref VESCH.

PLANIMETRIC LEGEND

- Storm Sewer Manhole
- Storm Sewer Curb Inlet
- Storm Sewer Grate
- Sanitary Sewer Manhole
- Fire Hydrant
- Water Valve
- Water Meter
- Unknown Utility Manhole
- Electric Manhole
- Electric Handhole
- Electric Transformer
- Light Pole
- Light Pole
- Power Pole
- Guy Wire
- Telephone Pedestal
- Communication Handhole
- Traffic Signal Box
- Traffic Signal Pole
- Pedestrian Signal Pole
- Tree
- Shrub
- Sign
- Control Point

Official Approved Plan
The City of Manassas

The following endorsement hereby represent that this plan has been reviewed by all of the appropriate departments and agencies, using the City of Manassas Code of Ordinances and the City DCSM; and based upon the affirmative recommendation of those departments and agencies has been found to be consistent with the regulations, ordinances, conditions and provisions related to the development and use of this parcel and may be Approved as the Official Plan.

Development Services Manager — Date

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085		
DATE OF PLAN ISSUANCE:	TBD		
CONSULTANT PROJECT ID:	RK&K		
DESIGNED BY:	DVL	DATE:	05/27/22
DRAWN BY:	DVL	DATE:	05/27/22
CHECKED BY:	MJK	DATE:	05/27/22
APPROVED BY:		DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TITLE SHEET

SHEET
1
SCALE AS NOTED

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS
1B	RIGHT OF WAY DATA SHEET
1C(1)-1C(2)	CONSTRUCTION ALIGNMENT DATA AND SURVEY CONTROL
* 1D	UTILITY TEST HOLE INFORMATION SHEETS
1E(1)-1E(12)	TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION
1F(1)-1F(2)	ROUNDABOUT DETAILS
1G(1)-1G(3)	EROSION AND SEDIMENT CONTROL PLANS AND DETAILS
1H	STORMWATER POLLUTION PREVENTION PLAN
1I	NOT USED
1J	EXISTING CONDITIONS
2	GENERAL NOTES
2A(1)-2A(3)	TYPICAL SECTIONS
2B(1)-2B(5)	CURB RAMP DETAILS
2C	GRADING SUMMARY
3	PLAN
3A	PROFILE - CENTREVILLE SOUTH
3B	PROFILE - CENTREVILLE NORTH
3C	PROFILE - PRESCOTT
3D	PROFILE - SUDLEY
3E	PROFILE - ROUNDABOUT
4	PROFILE - ENTRANCE
5	DRAINAGE DESCRIPTIONS
6	STORM SEWER PROFILES
7(1)-7(2)	INLET, STORM SEWER, & HGL COMPUTATIONS
7(3)-7(4)	PROPOSED DRAINAGE DIVIDES
7(5)	STORMWATER MANAGEMENT NARRATIVE AND COMPUTATIONS
7(6)	WATER QUALITY MAP
7(7)	WATER QUANTITY MAP
8(1)-8(7)	SIGNING AND PAVEMENT MARKING PLAN
9(1)-9(5)	LIGHTING PLAN
10	LANDSCAPING PLAN
X1-X15	CROSS SECTIONS

* NOT INCLUDED IN THIS SUBMISSION

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

INDEX OF SHEETS

SHEET
1A

SCALE N/A

RIGHT OF WAY DATA SHEET

PARCEL ID NO.	TAX MAP NO.	LANDOWNER	SHEET NO.	AREA									
				TOTAL	FEE TAKING		PRESCRIPTIVE R/W		FEE REMAINDER		EASEMENTS		
											TEMPORARY		PROFFERS
				ACRES OR SQUARE FEET	ACRES OR SQ.FEET	HECTARES/ OR SQ.METERS	ACRES OR SQ.FEET	HECTARES/ OR SQ.METERS	ACRES OR SQ.FEET	HECTARES/ OR SQ.METERS	ACRES OR SQ.FEET	HECTARES/ OR SQ.METERS	YES / NO
001	100-01-00-5	IRONHORSE LLC	3	0.2515 AC	252 SF	-	-	-	0.2457 AC	-	1518 SF	-	NO
002	100-05-05-5A	CENTREVILLE MANASSAS VA, LLC	3	1.5515 AC	2025 SF	-	-	-	1.5050 AC	-	1943 SF	-	NO
003	100-04-01-1	M C CORNER, LLC	3	2.4653 AC	2332 SF	-	-	-	2.4118 AC	-	16810 SF	-	NO
004	100-01-00-115B	AGR PROPERTIES, LP	3	1.7327 AC	4975 SF	-	-	-	1.6185 AC	-	3039 SF	-	NO
005	100-01-00-111A	FOOD LION, LLC	3	4.3662 AC	357 SF	-	-	-	4.3580 AC	-	608 SF	-	NO

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

RIGHT OF WAY DATA SHEET

SHEET
1B

SCALE: N/A

CONSTRUCTION ALIGNMENT DATA AND SURVEY CONTROL

(A) CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 14+25.00
CENTREVILLE ROAD NORTH CONSTR. ℄
STA. 30+00.00
PRESCOTT AVENUE CONSTR. ℄
STA. 53+50.00
SUDLEY ROAD CONSTR. ℄
STA. 73+50.00

(B) ROUNDABOUT CONSTR. ℄
STA. 91+81.92
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 13+78.00 =
DELTA = 90° 00' 00" LT.

(C) ROUNDABOUT CONSTR. ℄
STA. 92+29.23
PRESCOTT AVENUE CONSTR. ℄
STA. 53+03.00 =
DELTA = 90° 00' 00" LT.

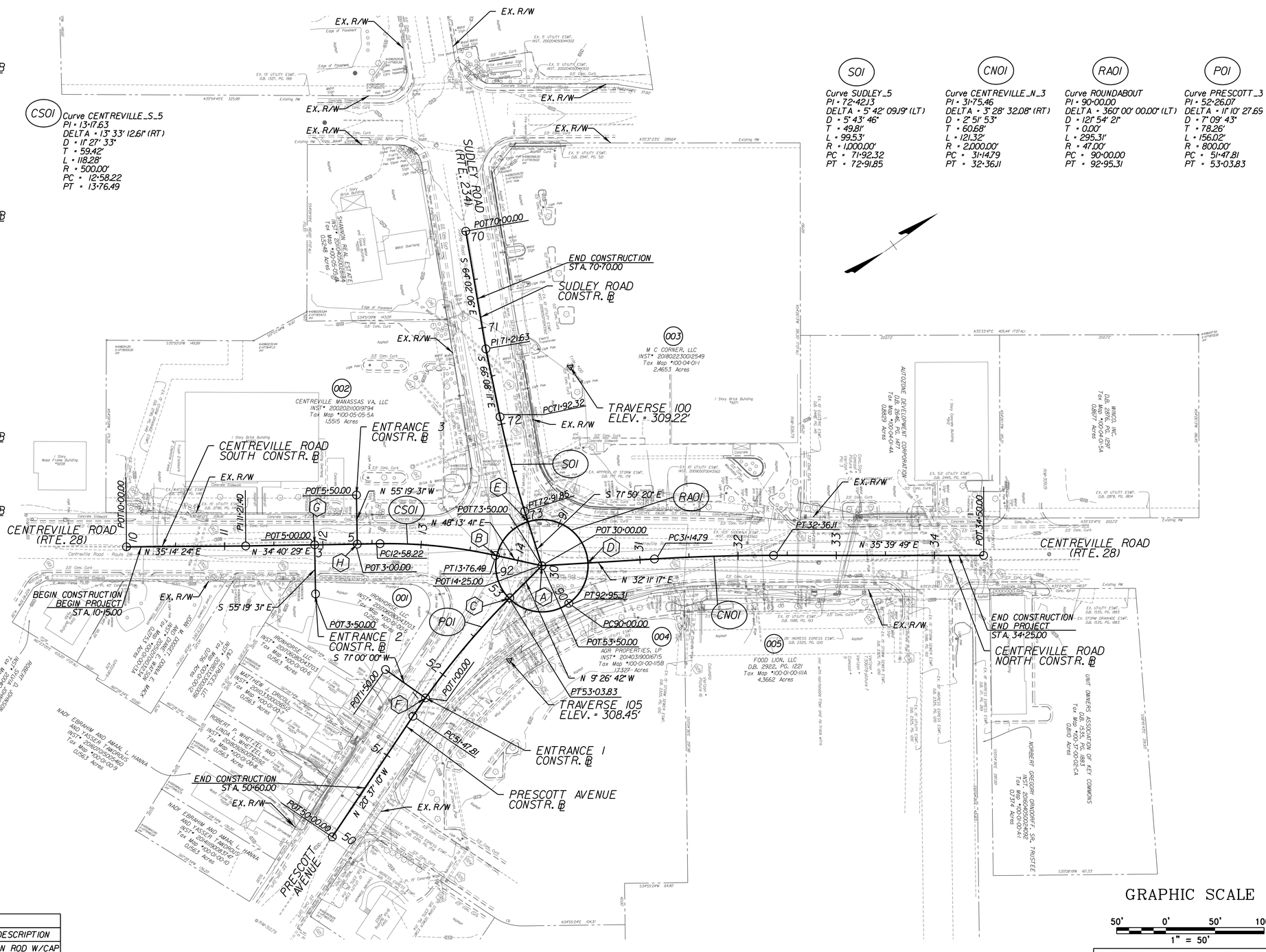
(D) ROUNDABOUT CONSTR. ℄
STA. 90+47.42
CENTREVILLE ROAD NORTH CONSTR. ℄
STA. 30+47.00 =
DELTA = 90° 00' 00" LT.

(E) ROUNDABOUT CONSTR. ℄
STA. 91+32.76
SUDLEY ROAD CONSTR. ℄
STA. 73+03.00 =
DELTA = 90° 00' 00" LT.

(F) ENTRANCE 1 CONSTR. ℄
STA. 1+00.00
PRESCOTT AVENUE CONSTR. ℄
STA. 51+70.42 =
DELTA = 90° 00' 00" LT.

(G) ENTRANCE 2 CONSTR. ℄
STA. 3+00.00
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 11+91.65 =
DELTA = 90° 00' 00" LT.

(H) ENTRANCE 3 CONSTR. ℄
STA. 5+00.00
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 12+35.02 =
DELTA = 90° 00' 00" LT.



TRAVERSE POINT LOCATION TABLE				
POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
100	6960478.66'	11778356.84'	309.22'	IRON ROD W/CAP
105	6960254.24'	11778563.55'	308.45'	IRON ROD W/CAP

THE HORIZONTAL COORDINATES PUBLISHED ABOVE ARE BASED ON VA STATE PLANE NAD1983 AND HAVE BEEN MULTIPLIED BY A COMBINED SCALE FACTOR OF 1.00005847 TO ESTABLISH GROUND COORDINATES.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CONSTRUCTION ALIGNMENT DATA AND SURVEY CONTROL

SHEET
1C(1)
SCALE 1"=50'

CONSTRUCTION ALIGNMENT DATA AND SURVEY CONTROL

CS01

Beginning chain CENTREVILLE_S description
Feature: - 25 Scale Baselines

Point 14 N 6,960,004.80 E 11,778,242.35 Sta 10+00.00

Course from 14 to 15 N 35° 14' 24.28" E Dist 121.40

Point 15 N 6,960,103.96 E 11,778,312.40 Sta 11+21.40

Course from 15 to PC CENTREVILLE_S_5 N 34° 40' 28.61" E Dist 136.82

Curve Data
#----------#

Curve CENTREVILLE_S_5

P.I. Station	13+17.63 N	6,960,265.34 E	11,778,424.04
Delta	= 13° 33' 12.61" (RT)		
Degree	= 11° 27' 32.96"		
Tangent	= 59.42		
Length	= 118.28		
Radius	= 500.00		
External	= 3.52		
Long Chord	= 118.00		
Mid.Ord.	= 3.49		
P.C. Station	12+58.22 N	6,960,216.47 E	11,778,390.24
P.T. Station	13+76.49 N	6,960,304.92 E	11,778,468.35
C.C.	N 6,959,932.02 E		11,778,801.43
Back	= N 34° 40' 28.61" E		
Ahead	= N 48° 13' 41.22" E		
Chord Bear	= N 41° 27' 04.91" E		

Course from PT CENTREVILLE_S_5 to 16 N 48° 13' 41.22" E Dist 48.51

Point 16 N 6,960,337.23 E 11,778,504.53 Sta 14+25.00

Ending chain CENTREVILLE_S description

CN01

Beginning chain CENTREVILLE_N description
Feature: - 25 Scale Baselines

Point 17 N 6,960,337.23 E 11,778,504.53 Sta 30+00.00

Course from 17 to PC CENTREVILLE_N_3 N 32° 11' 16.73" E Dist 114.79

Curve Data
#----------#

Curve CENTREVILLE_N_3

P.I. Station	31+75.46 N	6,960,485.73 E	11,778,598.00
Delta	= 3° 28' 32.08" (RT)		
Degree	= 2° 51' 53.24"		
Tangent	= 60.68		
Length	= 121.32		
Radius	= 2,000.00		
External	= 0.92		
Long Chord	= 121.30		
Mid.Ord.	= 0.92		
P.C. Station	31+14.79 N	6,960,434.37 E	11,778,565.67
P.T. Station	32+36.11 N	6,960,535.02 E	11,778,633.37
C.C.	N 6,959,368.98 E		11,780,258.28
Back	= N 32° 11' 16.73" E		
Ahead	= N 35° 39' 48.81" E		
Chord Bear	= N 33° 55' 32.77" E		

Course from PT CENTREVILLE_N_3 to 18 N 35° 39' 48.81" E Dist 213.89

Point 18 N 6,960,708.80 E 11,778,758.08 Sta 34+50.00

Ending chain CENTREVILLE_N description

P01

Beginning chain PRESCOTT description
Feature: - 25 Scale Baselines

Point PRESCOTT1 N 6,960,002.90 E 11,778,604.56 Sta 50+00.00

Course from PRESCOTT1 to PC PRESCOTT_3 N 20° 37' 09.90" W Dist 147.81

Curve Data
#----------#

Curve PRESCOTT_3

P.I. Station	52+26.07 N	6,960,214.49 E	11,778,524.94
Delta	= 11° 10' 27.69" (RT)		
Degree	= 7° 09' 43.10"		
Tangent	= 78.26		
Length	= 156.02		
Radius	= 800.00		
External	= 3.82		
Long Chord	= 155.78		
Mid.Ord.	= 3.80		
P.C. Station	51+47.81 N	6,960,141.24 E	11,778,552.50
P.T. Station	53+03.83 N	6,960,291.69 E	11,778,512.10
C.C.	N 6,960,422.97 E		11,779,301.26
Back	= N 20° 37' 09.89" W		
Ahead	= N 9° 26' 42.21" W		
Chord Bear	= N 15° 01' 56.05" W		

Course from PT PRESCOTT_3 to PRESCOTT5 N 9° 26' 42.21" W Dist 46.17

Point PRESCOTT5 N 6,960,337.23 E 11,778,504.53 Sta 53+50.00

Ending chain PRESCOTT description

S01

Beginning chain SUDLEY description
Feature: - 25 Scale Baselines

Point SUDLEY1 N 6,960,472.88 E 11,778,182.40 Sta 70+00.00

Course from SUDLEY1 to SUDLEY3 S 64° 02' 05.61" E Dist 121.63

Point SUDLEY3 N 6,960,419.63 E 11,778,291.76 Sta 71+21.63

Course from SUDLEY3 to PC SUDLEY_5 S 66° 08' 10.67" E Dist 70.69

Curve Data
#----------#

Curve SUDLEY_5

P.I. Station	72+42.13 N	6,960,370.88 E	11,778,401.95
Delta	= 5° 42' 09.19" (LT)		
Degree	= 5° 43' 46.48"		
Tangent	= 49.81		
Length	= 99.53		
Radius	= 1,000.00		
External	= 1.24		
Long Chord	= 99.49		
Mid.Ord.	= 1.24		
P.C. Station	71+92.32 N	6,960,391.03 E	11,778,356.40
P.T. Station	72+91.85 N	6,960,355.35 E	11,778,449.27
C.C.	N 6,961,305.54 E		11,778,760.96
Back	= S 66° 08' 10.67" E		
Ahead	= S 71° 50' 19.86" E		
Chord Bear	= S 68° 59' 15.27" E		

Course from PT SUDLEY_5 to SUDLEY7 S 71° 50' 19.86" E Dist 58.15

Point SUDLEY7 N 6,960,337.23 E 11,778,504.53 Sta 73+50.00

Ending chain SUDLEY description

RA01

Beginning chain ROUNDABOUT description
Feature: - 25 Scale Baselines

Curve Data
#----------#

Curve ROUNDABOUT

P.I. Station	90+00.00 N	6,960,337.23 E	11,778,551.53
Delta	= 360° 00' 00.00" (LT)		
Degree	= 121° 54' 21.29"		
Tangent	= 0.00		
Length	= 295.31		
Radius	= 47.00		
External	= 94.00		
Long Chord	= 0.00		
Mid.Ord.	= 94.00		
P.C. Station	90+00.00 N	6,960,337.23 E	11,778,551.53
P.T. Station	92+95.31 N	6,960,337.23 E	11,778,551.53
C.C.	N 6,960,337.23 E		11,778,504.53
Back	= Due North		
Ahead	= Due North		
Chord Bear	= Due North		

Ending chain ROUNDABOUT description

Beginning chain ENTR_1 description
Feature: - 25 Scale Baselines

Point 19 N 6,960,162.52 E 11,778,544.84 Sta 1+00.00

Course from 19 to 20 S 71° 00' 00.49" W Dist 50.00

Point 20 N 6,960,146.24 E 11,778,497.57 Sta 1+50.00

Ending chain ENTR_1 description

Beginning chain ENTR_2 description
Feature: - 25 Scale Baselines

Point 21 N 6,960,161.72 E 11,778,352.36 Sta 3+00.00

Course from 21 to 22 S 55° 19' 31.39" E Dist 50.00

Point 22 N 6,960,133.28 E 11,778,393.48 Sta 3+50.00

Ending chain ENTR_2 description

Beginning chain ENTR_3 description
Feature: - 25 Scale Baselines

Point 23 N 6,960,197.40 E 11,778,377.04 Sta 5+00.00

Course from 23 to 24 N 55° 19' 31.39" W Dist 50.00

Point 24 N 6,960,225.84 E 11,778,335.92 Sta 5+50.00

Ending chain ENTR_3 description

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

CONSTRUCTION ALIGNMENT DATA AND SURVEY CONTROL

SHEET
1C(2)

SCALE N/A

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

TEMPORARY TRAFFIC CONTROL PLAN

GENERAL NOTES:

TMP/SOC TYPE A PROJECT INFORMATION:

1. A. IDENTIFY THE PROJECT'S TMP TYPE:
THIS PROJECT'S TMP/SOC PLAN HAS BEEN DESIGNED IN CONFORMANCE WITH A TYPE A TMP/SOC PLAN.

B. IDENTIFY THE WORK ZONE LOCATION, LENGTH, AND WIDTHS:
THE PROJECT LOCATION IS AS SHOWN ON SHEET 1.
THE WORK ZONE AREAS HAVE BEEN DELINEATED AS DETAILED ON THE TMP/SOC PLAN SHEET 1E(3)–1E(8).

C. NOTE THE HOURS THE CONSTRUCTION AREA WILL BE ACTIVE:
THE CONSTRUCTION AREA SHALL BE CONSIDERED ACTIVE WHEN ANY IMPACT TO TRAFFIC OCCURS. (1ST CONE IN ROAD)

LANE CLOSURE HOURS HAVE THE FOLLOWING LIMITATIONS:

	SINGLE LANE CLOSURES (URBAN OTHER PRINCIPAL ARTERIAL)			
	MONDAY TO THURSDAY	FRIDAY	SATURDAY TO SUNDAY	SUNDAY TO MONDAY
DAY	9:30 AM TO 3:00 PM	9:30 AM TO 2:00 PM	–	–
NIGHT	10:00 PM TO 5:00 AM	–	–	–

	MULTIPLE LANE CLOSURES (URBAN OTHER PRINCIPAL ARTERIAL)			
	MONDAY TO THURSDAY	FRIDAY	SATURDAY TO SUNDAY	SUNDAY TO MONDAY
DAY	–	–	–	–
NIGHT	10:00 PM TO 5:00 AM	–	–	–

	SINGLE LANE CLOSURES (URBAN MINOR ARTERIAL)			
	MONDAY TO THURSDAY	FRIDAY	SATURDAY TO SUNDAY	SUNDAY TO MONDAY
DAY	9:00 AM TO 3:30 PM	9:00 AM TO 2:00 PM	–	–
NIGHT	9:00 PM TO 5:00 AM	–	–	–

	SINGLE LANE CLOSURES (URBAN LOCAL STREET)			
	MONDAY TO THURSDAY	FRIDAY	SATURDAY TO SUNDAY	SUNDAY TO MONDAY
DAY	9:00 AM TO 3:30 PM	9:00 AM TO 2:00 PM	–	–
NIGHT	9:00 PM TO 5:00 AM	–	–	–

WEEKEND WORK SHALL NOT BE ALLOWED.

NO LANE CLOSURES WILL BE ALLOWED FROM NOON ON THE DAY BEFORE A HOLIDAY UNTIL NOON ON THE WORKDAY FOLLOWING THE HOLIDAY. HOLIDAYS INCLUDE ALL STATE AND FEDERAL HOLIDAYS.

NIGHT TIME WORK SHALL NOT BE PERMITTED UNLESS APPROVED BY THE CITY OF MANASSAS. IF NIGHT TIME WORK IS REQUIRED, CONTRACTOR SHALL SUBMIT REQUIRED DOCUMENTATION AND OBTAIN PERMISSION FOR ANY NIGHT TIME WORK DUE TO NOISE ORDINANCE.

D. THE TMP/SOC PLAN, DURING CONSTRUCTION, SHALL BE IN ACCORDANCE WITH SECTIONS 512, 701, 703 & 704 OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, DATED 2020; THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL (VA WAPM), REVISION 2.1, NOVEMBER 1, 2020; THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009 EDITION; AND THE VIRGINIA SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2011 EDITION, REVISION 1, SEPTEMBER 30, 2013.

E. THE CONTRACTOR SHALL:
DESIGNATE A PERSON ASSIGNED TO THE PROJECT WHO WILL HAVE THE PRIMARY RESPONSIBILITY, WITH SUFFICIENT AUTHORITY, FOR IMPLEMENTING THE TMP/SOC AND OTHER SAFETY AND MOBILITY ASPECTS OF THE PERMIT WORK. THIS PERSON SHALL COORDINATE WITH THE CITY OF MANASSAS CONSTRUCTION INSPECTOR FOR THE DURATION OF CONSTRUCTION.

ENSURE THAT PERSONNEL ASSIGNED TO THE PROJECT ARE TRAINED IN TRAFFIC CONTROL TO A LEVEL COMMENSURATE WITH THEIR RESPONSIBILITIES IN ACCORDANCE WITH VDOT'S WORK ZONE TRAFFIC CONTROL TRAINING GUIDELINES.

INFORM THE ENGINEER OF ANY WORK REQUIRING LANE SHIFTS, LANE CLOSURES, AND/OR PHASE CHANGES; A MINIMUM OF ONE WEEK PRIOR TO IMPLEMENTING THIS ACTIVITY.

PERFORM REVIEWS OF THE CONSTRUCTION AREA, TO ENSURE COMPLIANCE WITH CONTRACT DOCUMENTS, AT REGULARLY SCHEDULED INTERVALS AT THE DIRECTION OF THE ENGINEER. CONTRACTOR SHALL MAINTAIN A COPY OF THE TEMPORARY TRAFFIC CONTROL PLAN AT THE WORK SITE AT ALL TIMES.

COORDINATE WITH CITY OF MANASSAS POLICE DEPARTMENT AND FIRE AND RESCUE DEPARTMENT FOR ANY LANE CLOSURES AND ANY DETOURS OF ANY NATURE.

SCHEDULE ALL PHASES OF CONSTRUCTION IN SUCH A MANNER THAT WATER, SANITARY SEWER, CABLE, FIBER CABLE/OPTIC CABLE, ANY OVERHANGING UTILITIES, AND ANY UNDERGROUND UTILITIES SERVICES WILL NOT BE INTERRUPTED.

2. THIS APPROVED TMP/SOC PLAN IS INTENDED AS A GUIDE. IT IS NOT TO ENUMERATE EVERY DETAIL WHICH MUST BE CONSIDERED IN THE CONSTRUCTION OF EACH PHASE, BUT ONLY TO SHOW THE GENERAL HANDLING OF EXISTING TRAFFIC. THE CONTRACTOR IS EXPECTED TO FOLLOW THE TMP/SOC PLAN AS PROPOSED. IF THE CONTRACTOR WISHES TO DEVIATE FROM THE APPROVED TMP/SOC PLAN, THE CONTRACTOR SHALL DEVELOP TMP/SOC PLANS, AT NO COST TO THE CITY, AND SUBMIT THE TMP/SOC PLAN FOR REVIEW AND APPROVAL BY THE CITY.

3. ALL AREAS EXCAVATED BELOW THE EXISTING PAVEMENT SURFACE AND WITHIN THE CLEAR ZONE AT THE CONCLUSION OF EACH WORKDAY, SHALL BE BACKFILLED TO FORM ON APPROXIMATE 6:1 WEDGE AGAINST THE EXISTING PAVEMENT OR NEWLY CONSTRUCTED PAVEMENT SURFACE FOR THE SAFETY AND PROTECTION OF VEHICULAR TRAFFIC.

4. TRAFFIC BARRIER SERVICE IS NOT PROPOSED FOR THE CONSTRUCTION OF THIS PROJECT.

5. IF A GEOTECHNICAL INVESTIGATION HAS BEEN PERFORMED FOR THE PROJECT, THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL RECOMMENDATIONS PROVIDED BY THE CITY OF MANASSAS.

6. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADD ANY ADDITIONAL TEMPORARY MEASURES NECESSARY TO FACILITATE PROPER, POSITIVE DRAINAGE FOR THE DURATION OF CONSTRUCTION.

7. WHERE GROUP 2 CHANNELIZING DEVICES ARE USED TO SEPARATE THE CONSTRUCTION AREA AND TRAFFIC, A MINIMUM CLEAR ZONE AREA AS DEFINED IN THE VA. WAPM. IS TO BE MAINTAINED.

8. THE CONTRACTOR SHALL COORDINATE WITH CITY OF MANASSAS FOR LOCATION(S) OF THE CONSTRUCTION STAGING AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND/OR EASEMENTS FOR THE STAGING AREA.

9. IMPLEMENTING THE TRANSPORTATION MANAGEMENT PLAN:

DURING THE FIRST DAY OF THE NEW WORK ZONE TRAFFIC PATTERN, THE PROJECT'S MANAGER AND CITY'S CONSTRUCTION INSPECTOR SHALL INSPECT THE WORK ZONE TO ENSURE COMPLIANCE WITH THE TMP. ON THE THIRD TO FOURTH DAY OF THE IMPLEMENTATION OF THE TMP'S NEW WORK ZONE TRAFFIC PATTERN, THE CONSTRUCTION INSPECTOR SHALL CONDUCT AN ON–SITE REVIEW OF THE WORK ZONE'S PERFORMANCE IN COORDINATION WITH THE CONSTRUCTION INSPECTOR AND RECOMMEND TO THE CONTRACTOR ANY REQUIRED CHANGES TO THE TMP TO ENHANCE THE WORK ZONE'S SAFETY AND MOBILITY. ANY SUCH CHANGES SHALL BE DOCUMENTED. AN ON–SITE REVIEW OF THE PROJECT'S WORK ZONE TRAFFIC CONTROL BY THE CITY'S CONSTRUCTION INSPECTOR AND THE CONTRACTOR SHALL BE CONDUCTED WITHIN 48 HOURS OF ANY FATAL INCIDENT/CRASH WITHIN THE WORK ZONE.

10. EVALUATION OF THE TRANSPORTATION MANAGEMENT PLAN:

A PERFORMANCE ASSESSMENT OF THE TMP INCLUDING AREA WIDE IMPACTS ON ADJACENT ROADWAYS SHALL BE PERFORMED BY THE CITY OF MANASSAS, IF REQUESTED BY VDOT.

11. PUBLIC COMMUNICATIONS PLAN:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR:

A. NOTIFYING THE PROJECT MANAGER AND CONSTRUCTION INSPECTOR TWO WEEKS IN ADVANCE OF ANY SCHEDULED WORK PLANS AND TRAFFIC DELAYS.

B. NOTIFYING THE PROJECT MANAGER, CONSTRUCTION INSPECTOR, AND CORRESPONDING ENGINEER OF ANY UNSCHEDULED TRAFFIC DELAYS.

12. TRANSPORTATION OPERATIONS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND PROVIDING THE FOLLOWING:

A. NOTIFY THE VDOT NORTHERN VIRGINIA TRAFFIC OPERATION CENTER (TOC) ONE WEEK IN ADVANCE IN ORDER TO PLACE LANE CLOSURE INFORMATION ON THE 511 SYSTEM AND VA–TRAFFIC.

B. POST A LIST OF LOCAL EMERGENCY RESPONSE AGENCIES INSIDE THE PROJECT'S CONSTRUCTION OFFICE/TRAILER.

C. IMMEDIATELY REPORT ANY TRAFFIC INCIDENTS THAT MAY OCCUR IN THE WORK ZONE.

D. NOTIFY THE PROJECT'S CONSTRUCTION INSPECTOR AND CORRESPONDING ENGINEER OF ANY INCIDENTS AND EXPECTED TRAFFIC DELAYS.

E. WITHIN 24 HOURS OF ANY INCIDENTS WITHIN THE CONSTRUCTION WORK ZONE, A REVIEW OF THE TRAFFIC CONTROLS SHALL BE COMPLETED AND NECESSARY ADJUSTMENTS MADE TO REDUCE THE FREQUENCY AND SEVERITY OF ANY FUTURE INCIDENTS.

CONTACT NUMBERS:

CITY PROJECT MANAGER – NYIKA ROBERSON–RAMOS – (703) 257–8397
CITY CONSTRUCTION MANAGER – TBD
CITY CONSTRUCTION INSPECTOR – TBD
POLICE/AMBULANCE/FIRE SAFETY/HAZMAT SPILLS – 911
VDOT NORTHERN VIRGINIA TRAFFIC OPERATION CENTER – (800) 367–7623
VIRGINIA STATE POLICE – (703) 803–8660
VDOT NOVA DISTRICT OFFICE – (703) 877–3401 (8:15 AM – 4:00 PM)
CITY OF MANASSAS DEPARTMENT OF PUBLIC WORKS – (703) 257–8429

NON–EMERGENCY NUMBERS:

CITY OF MANASSAS POLICE DEPARTMENT – (703) 257–8000
CITY OF MANASSAS FIRE AND RESCUE DEPARTMENT – (703) 257–8458

GENERAL CONSTRUCTION NOTES:

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL PROJECT LIMIT SIGNAGE IN ACCORDANCE WITH VA. WAPM. FIGURE TTC–53.0 (NOT GRAPHICALLY SHOWN ON THE PLANS). FOR THE DURATION OF CONSTRUCTION, THE CONTRACTOR SHALL ENSURE THIS SIGNAGE REMAINS IN COMPLIANCE IF THE PROJECT LIMITS CHANGE.

2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING PROPER DRAINAGE FOR THE DURATION OF ALL CONSTRUCTION PHASES AND INSTALLING ANY NECESSARY MEASURES TO FACILITATE PROPER DRAINAGE.

3. THE CONTRACTOR SHALL MAKE ANY NECESSARY ADJUSTMENTS DURING BOTH WORK AND NON–WORK HOURS TO ENSURE THE PROTECTION AND SAFETY OF THE ADJACENT PROPERTY OWNERS, PEDESTRIANS, VEHICULAR TRAFFIC AND THE GENERAL PUBLIC FROM ANY CONSTRUCTION RELATED ACTIVITY, CONSTRUCTION EQUIPMENT AND THE CONSTRUCTION SITE ITSELF.

4. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE SAFE TRAVEL ON THE ROADWAYS WITHIN THE WORK ZONE.

5. THE PUBLIC SHALL BE NOTIFIED OF THE EXPECTED CONSTRUCTION SCHEDULE ON THE CITY'S WEB SITE FOR THIS PROJECT. INFORMATION OF THE POTENTIAL FOR BACK–UPS DURING THE PEAK HOURS OF OPERATION IS PROVIDED BY THE VDOT NORTHERN VIRGINIA TRAFFIC OPERATION CENTER (TOC). THE CITY PROJECT MANAGER NEEDS TO COORDINATE WITH VDOT.

6. THE VDOT NORTHERN VIRGINIA TRAFFIC OPERATION CENTER (TOC) SHALL BE NOTIFIED OF LANE AND ROADWAY CLOSURE INFORMATION FOR DISTRIBUTION ON THE 511 SYSTEM AND VIRGINIA OPERATIONS INFORMATION SYSTEM (VOIS). EMERGENCY RESPONSE PROFESSIONALS SHALL RESPOND TO TRAFFIC INCIDENTS IN THE WORK ZONE AS SOON AS POSSIBLE.

7. THE APPROPRIATE CLEAR ZONE SHALL BE MAINTAINED, FREE OF PARKED EQUIPMENT AND STORED MATERIAL, OR PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THE VIRGINIA WORK AREA PROTECTION MANUAL. EQUIPMENT AND MATERIAL SHALL NOT BE STORED WITHIN THE ESTABLISHED CLEAR ZONE AND/OR DEFLECTION ZONE OF PHYSICAL BARRIERS IN ACCORDANCE WITH THE WORK AREA PROTECTION MANUAL.

8. CONTRACTOR SHALL REQUIRE THE APPROVAL OF THE ENGINEER FOR SELECTED LOCATIONS OF ANY STAGING AREA FOR STAGING AND FOR MATERIALS OR EQUIPMENT STORAGE.

9. ACCESS TO PRIVATE DRIVEWAYS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES.

CONSTRUCTION NARRATIVE:

THE CONTRACTOR SHALL INSTALL PROJECT LIMIT SIGNAGE IN ACCORDANCE WITH WAPM FIGURE TTC–53.0.

CONTRACTOR SHALL INSTALL EROSION AND SEDIMENT CONTROLS AS APPROPRIATE PRIOR TO STARTING WORK ON EACH PHASE.

CONSTRUCTION NARRATIVE (CONTINUED):

PRIOR TO OPENING CLOSED LANES TO DAILY PEAK HOUR TRAFFIC, COVER AND PROTECT UNFINISHED

EXCAVATED AREAS WITHIN THE CLEAR ZONE WITH TEMPORARY BACKFILL OR STEEL PLATES.

THE TRAFFIC PATTERN SHOULD REMAIN IN THE CURRENT CONFIGURATION UNTIL ALL LANE MARKINGS AND SIGNING ARE IN PLACE BEFORE SHIFTING TRAFFIC TO THE NEW PATTERN.

PHASE 1

A. DURING NON–PEAK HOURS, RELOCATE EXISTING TRAFFIC SIGNAL STRAIN POLES OUTSIDE PROPOSED SIDEWALKS IN NE AND SW QUADRANTS OF THE INTERSECTION. REMOVE EXISTING PRESCOTT SIGNAL POLE FROM THE NW RAISED CONCRETE MEDIAN. REMOVE EXISTING PEDESTRIAN SIGNAL POLE FROM EXISTING NE RAISED CONCRETE MEDIAN. REMOVE EXISTING CROSSWALK ACROSS EAST LEG OF CENTREVILLE ROAD AND INSTALL TEMPORARY CROSSWALKS ACROSS THE WEST LEG OF CENTREVILLE ROAD. INSTALL TEMPORARY PEDESTRIAN SIGNALS FOR THE WEST LEG CROSSWALK IN THE SW AND SE QUANDRANTS OF THE INTERSECTION. USE WAPM FIGURES TTC–16.2, TTC–17.2, TTC–26.2, TTC–27.2, TTC–28.2, TTC–29.2, AND TTC–50.2 FOR PLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNS TO DO THIS WORK.

B. DURING NON–PEAK HOURS, DEMOLISH BOTH EXISTING, RAISED CONCRETE ISLANDS, ADJUST EXISTING MANHOLES TO EXISTING STREET GRADE, AND CONSTRUCT FULL DEPTH PAVEMENT WITHIN THE FOOTPRINT OF THE FORMER RAISED ISLANDS. MATCH PROPOSED FULL DEPTH PAVEMENT TO EXISTING STREET GRADE. USE WAPM FIGURES TTC–16.2, TTC–17.2, TTC–26.2, TTC–27.2, TTC–28.2, TTC–29.2, TTC–58.1, AND TTC–59.1 FOR PLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNS TO DO THIS WORK.

PHASE 2

A. USE WAPM FIGURES TTC–16.2, TTC–17.2, TTC–26.2, TTC–27.2, TTC–28.2, TTC–29.2, TTC–34.2, TTC–36.2, TTC–58.1, AND TTC–59.1 FOR PLACEMENT OF TEMPORARY TRAFFIC CONTROL DEVICES AND CONSTRUCTION SIGNS TO DO THE PHASE 2 WORK.

B. DETOUR THE LEFT TURN MOVEMENT FROM WB CENTREVILLE ROAD TO PRESCOTT AVENUE, AND CLOSE THIS LEFT TURN LANE; THE DETOUR WILL USE NB CARRIAGE LANE, WB MATHIS AVENUE, AND SB SUDLEY ROAD. COVER EXISTING SIGNAL HEAD FOR THE DETOURED LEFT TURN MOVEMENT TO PRESCOTT UNTIL PHASE 2 IS COMPLETED. MAINTAIN THE LEFT TURN MOVEMENT FROM EB CENTREVILLE TO SUDLEY ROAD.

C. DURING NON–PEAK HOURS, INSTALL TEMPORARY PAVEMENT MARKINGS AS SHOWN FOR THIS PHASE ON CENTREVILLE ROAD AND PRESCOTT AVENUE, AND ERRADICATE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY PAVEMENT MARKINGS FOR THIS PHASE.

D. INSTALL TEMPORARY PEDESTRIAN SIGNAL FOR THE SUDLEY ROAD PROPOSED CURB RAMP IN THE NW QUADRANT OF THE INTERSECTION.

E. PROVIDE 5' MINIMUM ADA COMPLIANT, PEDESTRIAN CORRIDOR THROUGH THE WORK ZONES IN THE NE AND NW QUADRANTS OF THE INTERSECTION, AND MAINTAIN CROSSWALKS SHOWN FOR THIS PHASE.

F. SHIFT TRAFFIC ON CENTREVILLE AND PRESCOTT AS SHOWN FOR THIS PHASE.

G. DURING NON–PEAK HOURS, DEMOLISH EXISTING ELEMENTS IN CONFLICT WITH PROPOSED DESIGN, AND CONSTRUCT PROPOSED DRAINAGE, CURB AND GUTTER, CURB, MS–1A ISLAND, CURB RAMPS, PAVEMENT IMPROVEMENTS, PARKING LOT IMPROVEMENTS, SIDEWALKS, AND LIGHTING IMPROVEMENTS FOR NW AND NE QUADRANTS OF THE INTERSECTION AS SHOWN FOR THIS PHASE.

H. DURING NON–PEAK HOURS, CLOSE THE NB OUTSIDE LANE ON SUDLEY ROAD AS SHOWN TO FACILITATE CONSTRUCTION WORK FOR THIS PHASE.

PHASE 3

A. DURING NON–PEAK HOURS (NIGHTTIME WORK), CLOSE CENTREVILLE ROAD BETWEEN MAPLE STREET AND CARRIAGE LANE, AND DETOUR EB AND WB CENTREVILLE ROAD TRAFFIC AROUND WORK AREA, USING CARRIAGE LANE, MATHIS AVENUE, MAPLE STREET, AND SUDLEY ROAD. USE WAPM FIGURE TTC–34.2.

B. CONSTRUCT PROPOSED PAVEMENT IMPROVEMENTS TO THE TOP OF THE BINDER LAYER OR 2–INCHES BELOW FINISHED GRADE, AND TRANSITION PROPOSED PAVEMENT DOWN TO TIE INTO THE EXISTING PAVEMENT. USE WAPM FIGURES TTC–34.2, TTC–58.1, AND TTC–59.1.

C. INSTALL TEMPORARY CROSSWALK ACROSS SUDLEY ROAD AND ADJUST SUDLEY ROAD STOP BAR AS SHOWN FOR THIS PHASE. INSTALL TEMPORARY PEDESTRIAN SIGNAL IN THE NW QUADRANT OF THE INTERSECTION.

PHASE 4A

A. DURING NON–PEAK HOURS, INSTALL ADVANCE WARNING CONSTRUCTION SIGNS TO DETOUR THE LEFT TURN MOVEMENT FROM EB CENTREVILLE ROAD TO SUDLEY ROAD, AND CLOSE THIS LEFT TURN LANE; THE DETOUR WILL USE LIBERIA AVENUE, WB MATHIS AVENUE, AND NB SUDLEY ROAD. COVER THE EXISTING SIGNAL HEAD FOR THE LEFT TURN MOVEMENT TO SUDLEY ROAD.

B. DURING NON–PEAK HOURS, INSTALL TEMPORARY PAVEMENT MARKINGS ON CENTREVILLE ROAD EAST OF PRESCOTT AVENUE, ON PRESCOTT AVENUE, AND ON SUDLEY ROAD AS SHOWN FOR THIS PHASE. SHIFT TRAFFIC TO NEW PATTERN AS SHOWN FOR THIS PHASE ON CENTREVILLE ROAD, PRESCOTT AVENUE, AND SUDLEY ROAD. UNCOVER THE SIGNAL HEAD FOR THE LEFT TURN MOVEMENT FROM WB CENTREVILLE ROAD TO PRESCOTT AVENUE, AND REOPEN THAT LEFT TURN LANE.

C. PROVIDE 5' MINIMUM ADA COMPLIANT, PEDESTRIAN CORRIDOR THROUGH WORK ZONE, AND MAINTAIN PHASE 4A AND PHASE 4B CROSSWALKS AND TEMPORARY PEDESTRIAN SIGNALS FOR THE PROPOSED CURB RAMPS.

D. DURING NON–PEAK HOURS, DEMOLISH EXISTING ELEMENTS IN CONFLICT WITH PROPOSED DESIGN, AND CONSTRUCT PROPOSED DRAINAGE, CURB AND GUTTER, CURB, CURB RAMPS, PAVEMENT IMPROVEMENTS, SIDEWALKS, COMMERCIAL ENTRANCES, AND LIGHTING IMPROVEMENTS FOR ONLY THE SW QUANDRANT OF THE INTERSECTION.

E. USE USE WAPM FIGURES TTC–16.2, TTC–17.2, TTC–26.2, TTC–27.2, TTC–28.2, TTC–29.2, TTC–34.2, TTC–36.2, TTC–50.2, AND TTC–58.1, AND TTC–59.1 TO DO ALL THE PHASE 4A WORK.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

ADVANCED WORK ZONE TRAFFIC CONTROL TRAINING

DESIGNER
MATTHEW J. KAISER
VERIFICATION NO.:
061119105

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T–085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T–085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(1)
SCALE N/A

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

CONSTRUCTION NARRATIVE (CONTINUED):

PHASE 4B

A. ONCE THE SW QUADRANT (PHASE 4A) WORK IN THE INTERSECTION IS COMPLETE. SHIFT SOUTH LEG OF THE CENTREVILLE ROAD EB AND WB LANES UP TO THE COMPLETED SW QUANDRANT SIDE, AND BEGIN CONSTRUCTION WORK ON THE SE QUADRANT OF THE INTERSECTION. DEMOLISH EXISTING ELEMENTS IN CONFLICT WITH PROPOSED DESIGN, AND CONSTRUCT PROPOSED DRAINAGE, CURB AND GUTTER, CURB, CURB RAMPS, PAVEMENT IMPROVEMENTS, SIDEWALKS, COMMERCIAL ENTRANCES, AND LIGHTING IMPROVEMENTS. INSTALL TEMPORARY PEDESTRIAN SIGNAL FOR THE PROPOSED CURB RAMP. USE USE WAPM FIGURES TTC-16.2, TTC-17.2, TTC-26.2, TTC-27.2, TTC-28.2, TTC-29.2, TTC-34.2, TTC-36.2, TTC-58.1, AND TTC-59.1 TO DO ALL THE PHASE 4B WORK.

PHASE 5

A. DURING NON-PEAK HOURS (NIGHTTIME WORK), USE MAPLE STREET, MATHIS AVENUE, AND CARRIAGE LANE TO DETOUR CENTREVILLE ROAD EB AND WB TRAFFIC AROUND WORK AREA. USE WAPM FIGURE TTC-34.2 TO DO THIS WORK.

B. CONSTRUCT PROPOSED PAVEMENT IMPROVEMENTS UP TO TOP OF THE BINDER LAYER OR 2-INCHES BELOW FINISHED GRADE, AND TIE INTO PROPOSED PAVEMENT IMPROVEMENTS FROM PREVIOUS PHASE TO COMPLETE THE PROPOSED PAVEMENT (LESS FINAL WEARING SURFACE LAYER) FOR THE INTERSECTION AND APPROACHING ROADWAYS. USE WAPM FIGURES TTC-34.2, TTC-58.1, AND TTC-59.1 TO DO THIS WORK.

PHASE 6

A. DURING NON-PEAK HOURS, INSTALL TEMPORARY PAVEMENT MARKINGS MATCHING THE ULTIMATE PAVEMENT MARKING CONFIGURATION FOR THE ROUNDABOUT. INSTALL TEMPORARY CIRCULAR MARKINGS ON PAVEMENT TO DENOTE THE LIMITS OF THE APRON AND CENTER ISLAND OF THE FUTURE ROUNDABOUT. SHIFT TRAFFIC TO THE NEW TRAFFIC PATTERN FOR THIS PHASE. USE WAPM FIGURES TTC-32.2 AND TTC-33.2.

B. DURING NON-PEAK HOURS, REMOVE THE EXISTING TRAFFIC SIGNALS AND TEMPORARY PEDESTRIAN SIGNALS. USE TTC-32.2, TTC-33.2, AND TTC-50.2 TO DO THIS WORK.

C. DURING NON-PEAK HOURS, CLOSE THE INSIDE LANE FOR ALL APPROACHES AND ROUNDABOUT. CONSTRUCT THE PROPOSED ROUNDABOUT CENTRAL ISLAND, CONCRETE APRON, AND SPLITTER ISLANDS. INSTALL LANDSCAPE IMPROVEMENTS AND LIGHTING IMPROVEMENTS. ALTERNATE THE APPLICATION OF WAPM FIGURES TTC-32.2 AND TTC-33.2 TO DO THIS WORK.

D. ALTERNATE THE CONSTRUCTION OF THE SPLITTER ISLANDS TO ALLOW ADEQUATE PEDEDTRIAN ACCESS TO THE CROSSWALKS.

E. DURING NON-PEAK PERIODS, ONCE THE ROUNDABOUT ISLANDS, APRON, AND SPLITTER ISLANDS ARE COMPLETED, INSTALL WEARING SURFACE LAYER AND PLACE ULTIMATE PAVEMENT MARKINGS AND TRAFFIC SIGNS. COMPLETE REMAINING ITEMS OF WORK. ALTERNATE THE APPLICATION OF WAPM FIGURES TTC-32.2, TTC-33.2, TTC-58.1, AND TTC-59.1 TO DO THIS WORK.

F. REMOVE TEMPORARY EROSION CONTROL MEASURES AND TEMPORARY CONSTRUCTION SIGNS AND DEVICES.

CONSTRUCTION PAVEMENT MARKING GENERAL NOTES:
(DURING CONSTRUCTION ONLY)

1. ALL CONSTRUCTION PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF EACH OF THE FOLLOWING AND ANY REVISION THEREOF:

A. MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2009

B. THE VIRGINIA SUPPLEMENT TO THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2011, REVISION 1, SEPTEMBER 30, 2013

C. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, 2020

D. THE VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE STANDARDS, 2016, REVISED – DECEMBER 2021

2. ALL CONSTRUCTION PAVEMENT MARKINGS SHALL BE OF TYPE A OR TYPE D, CLASS II, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. DURING CONSTRUCTION ANY PAVEMENT MARKINGS WHICH WILL CONFLICT WITH THOSE SHOWN ON THE TMP/SOC PLANS, OR AS DIRECTED BY THE ENGINEER, SHALL BE COVERED WITH TYPE E, NON-REFLECTIVE BLACK TAPE (OR ERADICATED AT THE DIRECTION OF THE ENGINEER).

3. ELONGATED ARROWS SHALL BE IN ACCORDANCE WITH MUTCD AND VDOT ROAD AND BRIDGE STANDARD.

TRANSPORTATION OPERATION PLAN:

THE VDOT PUBLIC AFFAIRS SECTION AND THE VDOT TRANSPORTATION OPERATIONS CENTER SHALL BE NOTIFIED BY THE CONSTRUCTION PROJECT MANAGER OF LANE CLOSURE INFORMATION FOR DISTRIBUTION ON THE 511 SYSTEM AND VIRGINIA OPERATIONS INFORMATION SYSTEM (VOIS). THE CONTRACTOR SHALL ACQUIRE APPROVAL FROM VDOT 4 WEEKS PRIOR TO CONSTRUCTION. FOLLOWING ANY TRAFFIC INCIDENTS, THE CONTRACTOR SHALL CLEAN AND RESTORE THE SITE FOR NORMAL OPERATIONS AS SOON AS POSSIBLE.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

ADVANCED WORK ZONE TRAFFIC CONTROL TRAINING

DESIGNER
MATTHEW J. KAISER
VERIFICATION NO.:
061119105

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

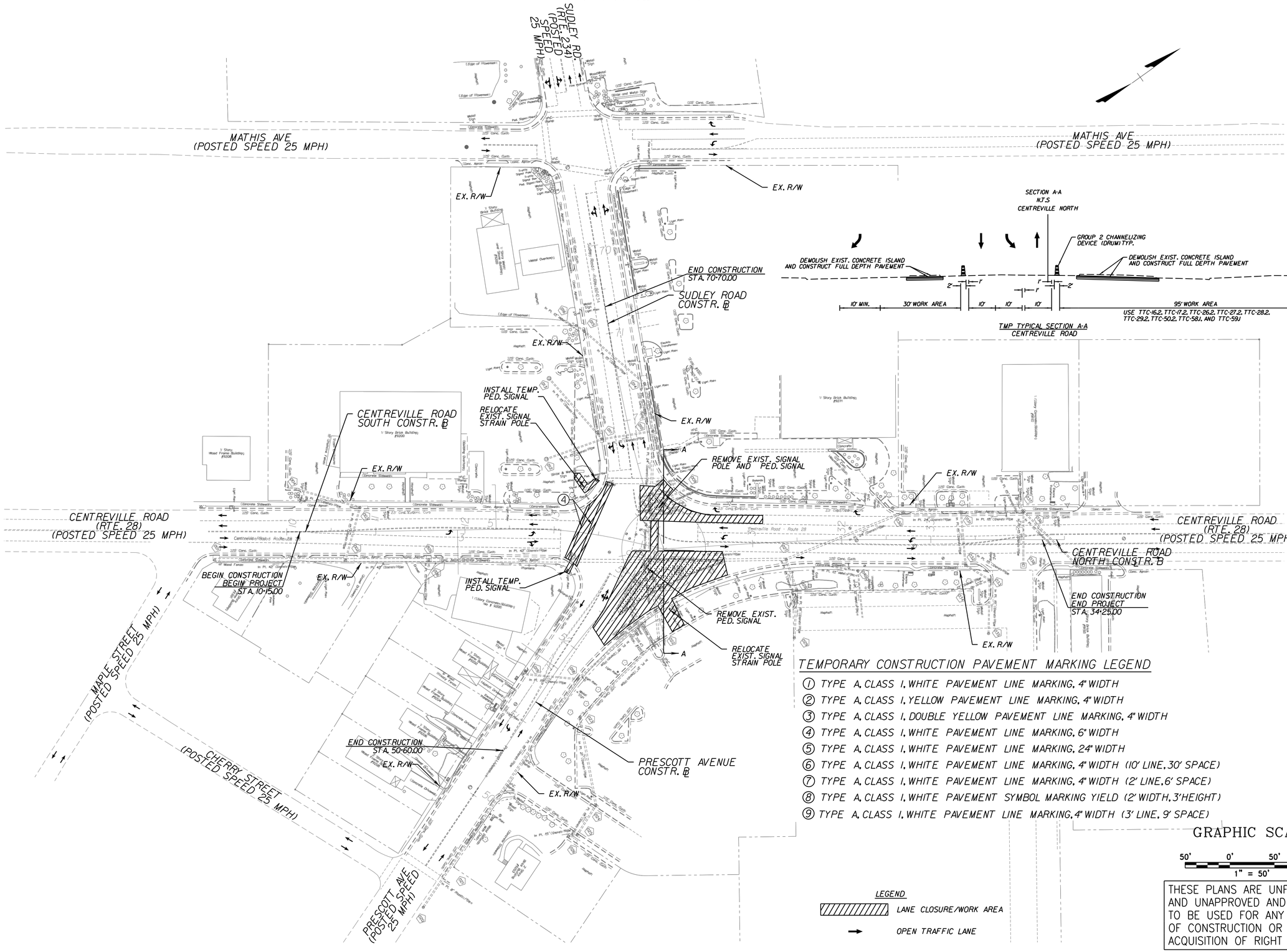
DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(2)
SCALE N/A

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION
PHASE I



TMP TYPICAL SECTION A-A
CENTREVILLE ROAD

TEMPORARY CONSTRUCTION PAVEMENT MARKING LEGEND

1. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
2. TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
3. TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
4. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH
5. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
6. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
7. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 6' SPACE)
8. TYPE A, CLASS I, WHITE PAVEMENT SYMBOL MARKING YIELD (2' WIDTH, 3' HEIGHT)
9. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (3' LINE, 9' SPACE)

GRAPHIC SCALE

50' 0' 50' 100'

1" = 50'

LEGEND

LANE CLOSURE/WORK AREA

OPEN TRAFFIC LANE

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

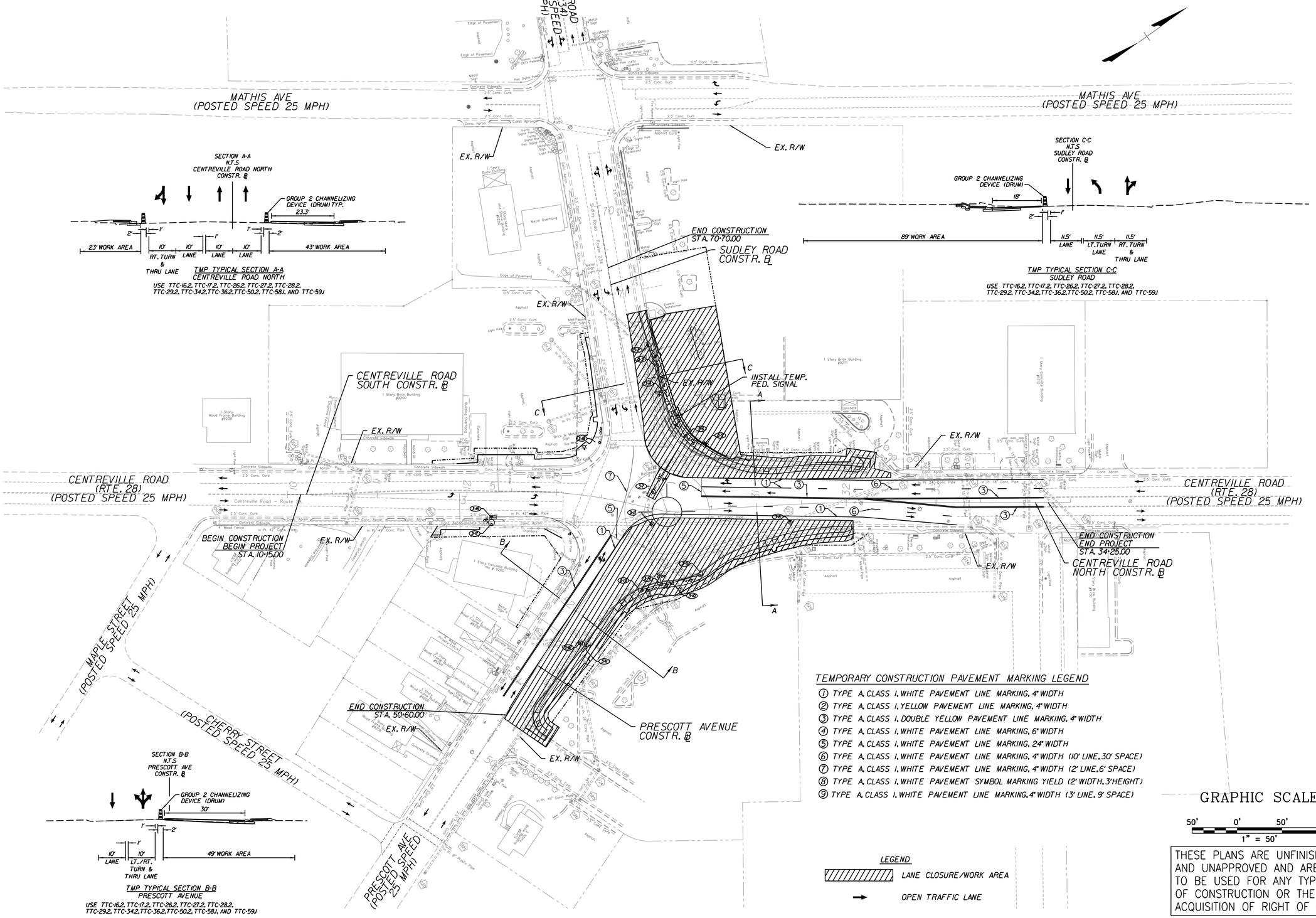
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(3)

SCALE 1"=50'

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION
PHASE 2



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

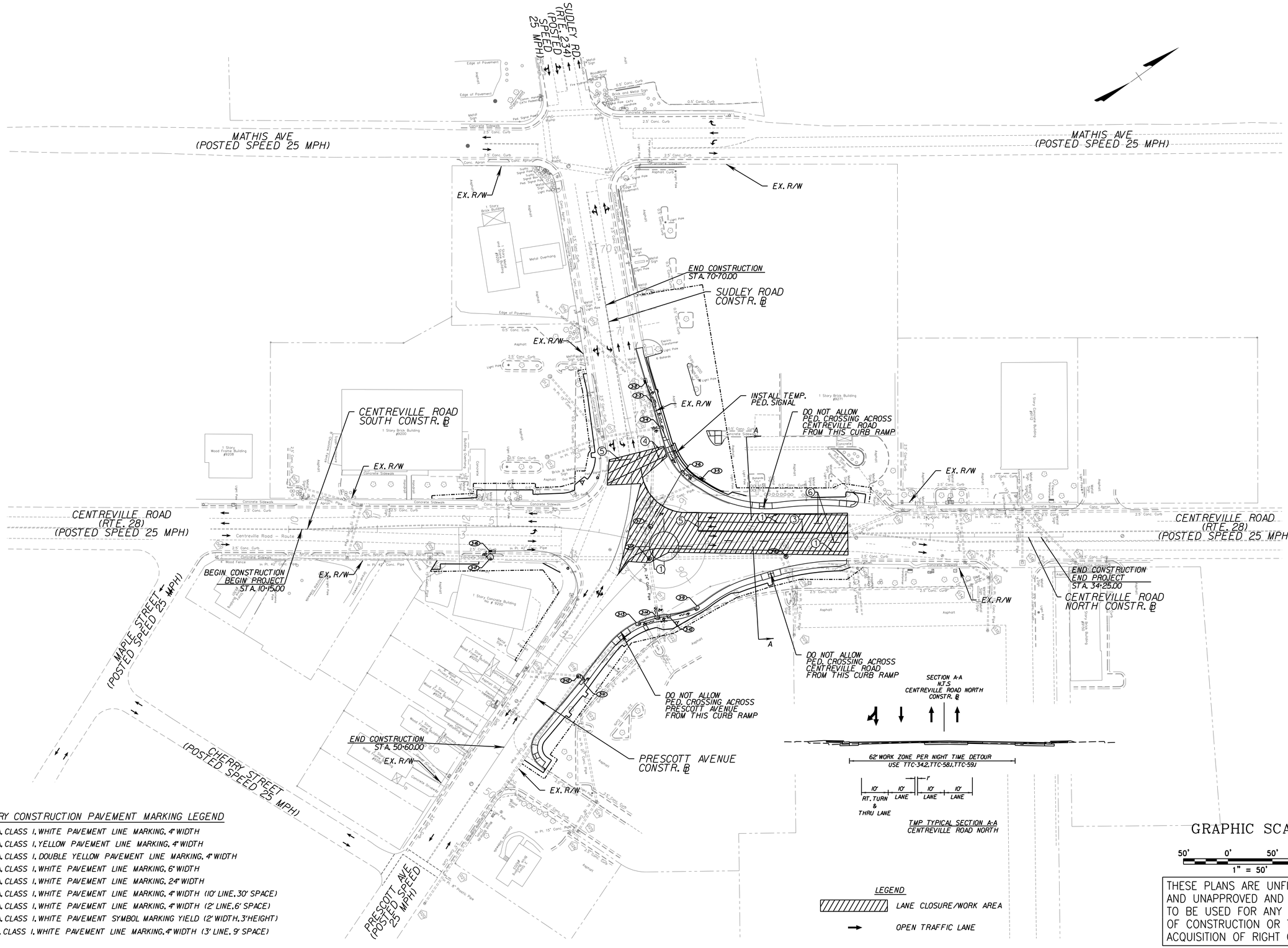
MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL DATE:	05/27/22
DRAWN BY: DVL DATE:	05/27/22
CHECKED BY: MJK DATE:	05/27/22
APPROVED BY: DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(4)
SCALE 1"=50'

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION
PHASE 3



TEMPORARY CONSTRUCTION PAVEMENT MARKING LEGEND

1. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
2. TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
3. TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
4. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH
5. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
6. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
7. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 6' SPACE)
8. TYPE A, CLASS I, WHITE PAVEMENT SYMBOL MARKING YIELD (2' WIDTH, 3' HEIGHT)
9. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (3' LINE, 9' SPACE)

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

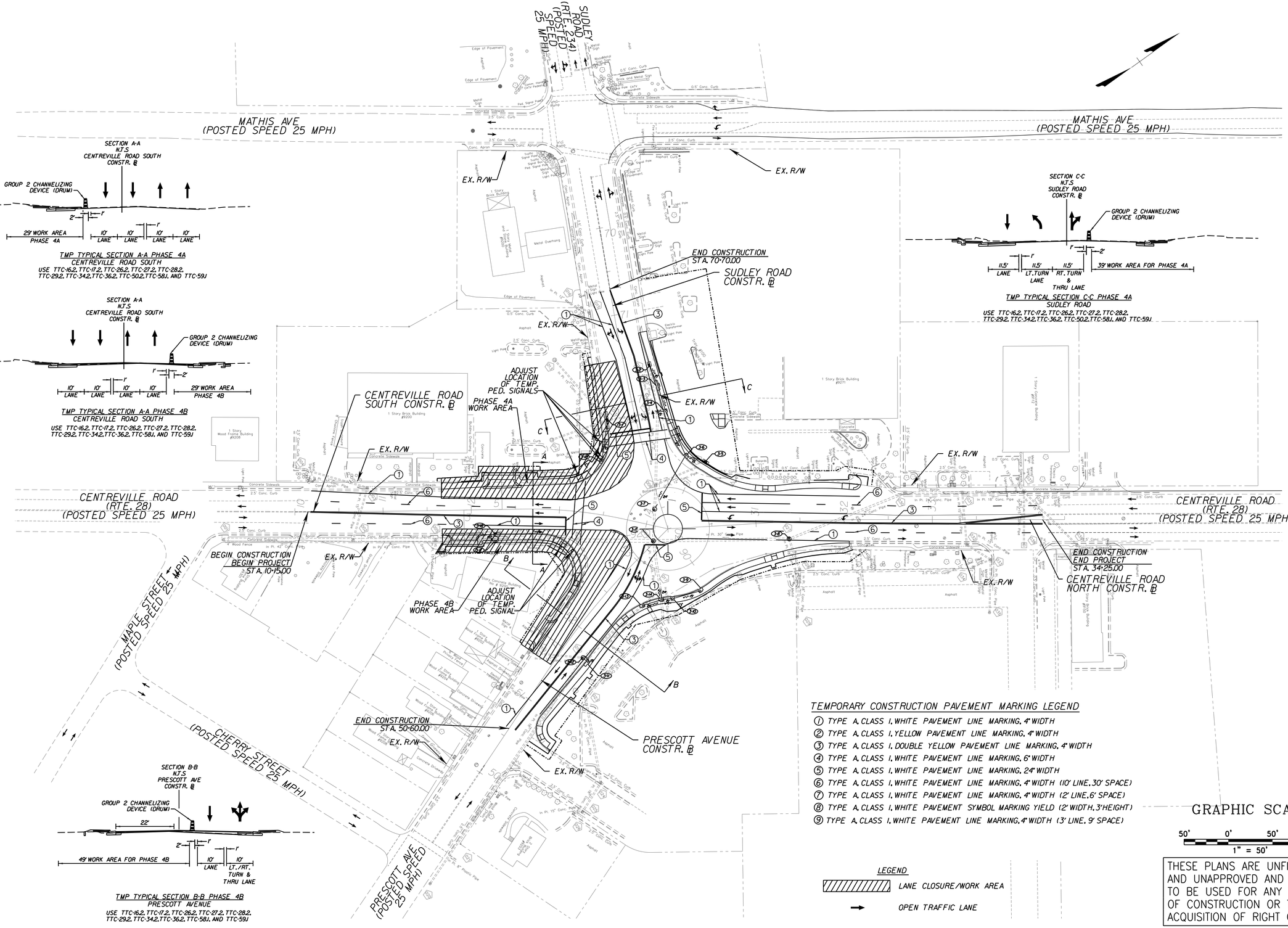
MANASSAS PROJECT NO:	T-085	
DATE OF PLAN ISSUANCE:	TBD	
CONSULTANT PROJECT ID:	RK&K	
DESIGNED BY:	DVL	DATE: 05/27/22
DRAWN BY:	DVL	DATE: 05/27/22
CHECKED BY:	MJK	DATE: 05/27/22
APPROVED BY:		DATE:

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

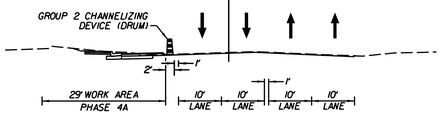
TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(5)
SCALE 1"=50'

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION PHASE 4A AND 4B

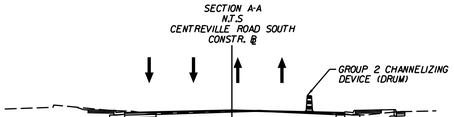


SECTION A-A
N.T.S
CENTREVILLE ROAD SOUTH CONSTR. ℄



TMP TYPICAL SECTION A-A PHASE 4A
CENTREVILLE ROAD SOUTH
USE TTC-16.2, TTC-17.2, TTC-26.2, TTC-27.2, TTC-28.2, TTC-29.2, TTC-34.2, TTC-36.2, TTC-50.2, TTC-58.J, AND TTC-59.J

SECTION A-A
N.T.S
CENTREVILLE ROAD SOUTH CONSTR. ℄



TMP TYPICAL SECTION A-A PHASE 4B
CENTREVILLE ROAD SOUTH
USE TTC-16.2, TTC-17.2, TTC-26.2, TTC-27.2, TTC-28.2, TTC-29.2, TTC-34.2, TTC-36.2, TTC-58.J, AND TTC-59.J

SECTION C-C
N.T.S
SUDLEY ROAD CONSTR. ℄

TMP TYPICAL SECTION C-C PHASE 4A
SUDLEY ROAD
USE TTC-16.2, TTC-17.2, TTC-26.2, TTC-27.2, TTC-28.2, TTC-29.2, TTC-34.2, TTC-36.2, TTC-50.2, TTC-58.J, AND TTC-59.J

SECTION B-B
N.T.S
PRESCOTT AVE CONSTR. ℄

TMP TYPICAL SECTION B-B PHASE 4B
PRESCOTT AVENUE
USE TTC-16.2, TTC-17.2, TTC-26.2, TTC-27.2, TTC-28.2, TTC-29.2, TTC-34.2, TTC-36.2, TTC-58.J, AND TTC-59.J

TEMPORARY CONSTRUCTION PAVEMENT MARKING LEGEND

1. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
2. TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
3. TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
4. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH
5. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
6. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
7. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 6' SPACE)
8. TYPE A, CLASS I, WHITE PAVEMENT SYMBOL MARKING YIELD (2' WIDTH, 3' HEIGHT)
9. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (3' LINE, 9' SPACE)

LEGEND

LANE CLOSURE/WORK AREA

OPEN TRAFFIC LANE

GRAPHIC SCALE

50' 0' 50' 100'
1" = 50'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

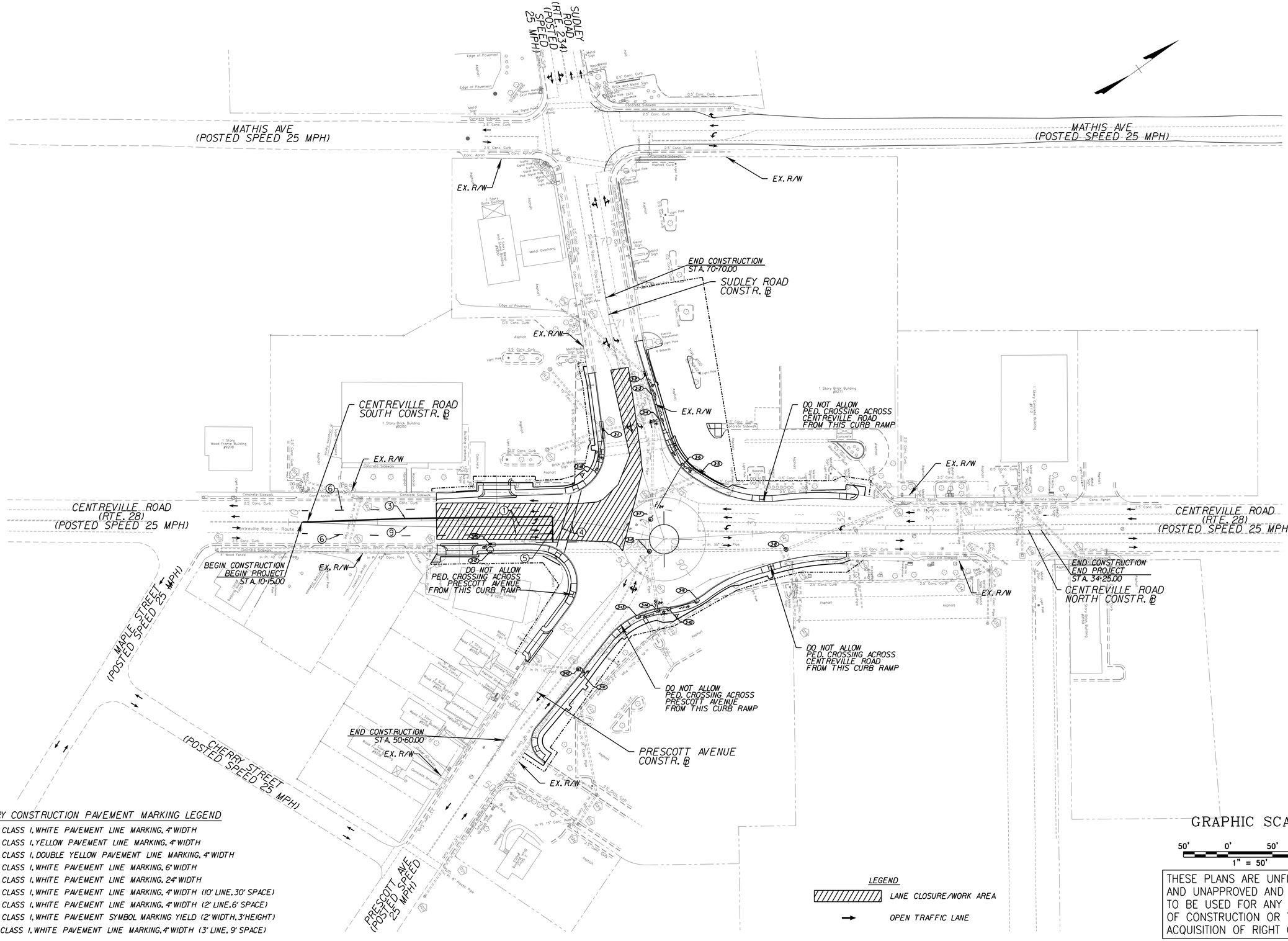
MANASSAS PROJECT NO:	T-085		
DATE OF PLAN ISSUANCE:	TBD		
CONSULTANT PROJECT ID:	RK&K		
DESIGNED BY:	DVL	DATE:	05/27/22
DRAWN BY:	DVL	DATE:	05/27/22
CHECKED BY:	MJK	DATE:	05/27/22
APPROVED BY:		DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(6)
SCALE 1"=50'

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION
PHASE 5



TEMPORARY CONSTRUCTION PAVEMENT MARKING LEGEND

1. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
2. TYPE A, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
3. TYPE A, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH
4. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH
5. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
6. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (10' LINE, 30' SPACE)
7. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (2' LINE, 6' SPACE)
8. TYPE A, CLASS I, WHITE PAVEMENT SYMBOL MARKING YIELD (2' WIDTH, 3' HEIGHT)
9. TYPE A, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH (3' LINE, 9' SPACE)

LEGEND

LANE CLOSURE/WORK AREA

OPEN TRAFFIC LANE

GRAPHIC SCALE

50' 0' 50' 100'

1" = 50'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL DATE:	05/27/22
DRAWN BY: DVL DATE:	05/27/22
CHECKED BY: MJK DATE:	05/27/22
APPROVED BY: DATE:	

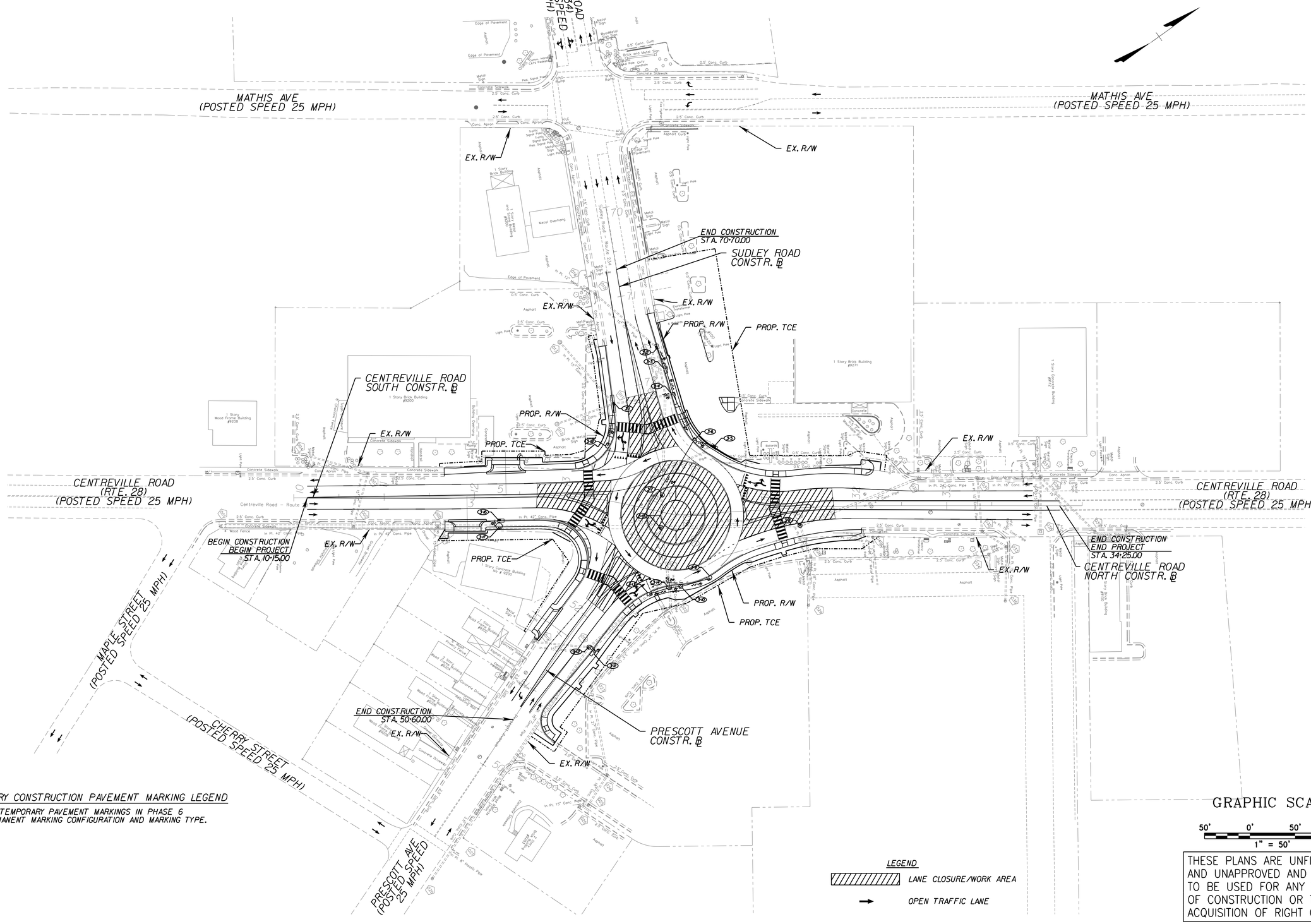
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(7)

SCALE 1"=50'

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION
PHASE 6



TEMPORARY CONSTRUCTION PAVEMENT MARKING LEGEND

NOTE: SET TEMPORARY PAVEMENT MARKINGS IN PHASE 6 USING PERMANENT MARKING CONFIGURATION AND MARKING TYPE.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL DATE:	05/27/22
DRAWN BY: DVL DATE:	05/27/22
CHECKED BY: MJK DATE:	05/27/22
APPROVED BY: DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(8)
SCALE 1"=50'

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

Typical Traffic Control
Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)
NOTES

Standard:

1. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.*[1]
4. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*
5. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

6. **Taper length (L) and channelizing device spacing shall be at the following:**

Taper Length L											
Speed Limit (mph)	Lane Width (Feet)				Remarks	Speed Limit (mph)	Lane Width (Feet)				Remarks
	9	10	11	12			9	10	11	12	
25	95	105	115	125	L=S*W/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=S*W/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=S*W/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=S*W/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Limited Access highways shall use a 1000' merging taper regardless of the posted speed.											
Shifting Tapers see Table 6H-2[1]						Shoulder Taper = ⅓ L Minimum					

7. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing								
Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)	
	0 -35	36 +		0 -35	36 +		0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	* Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

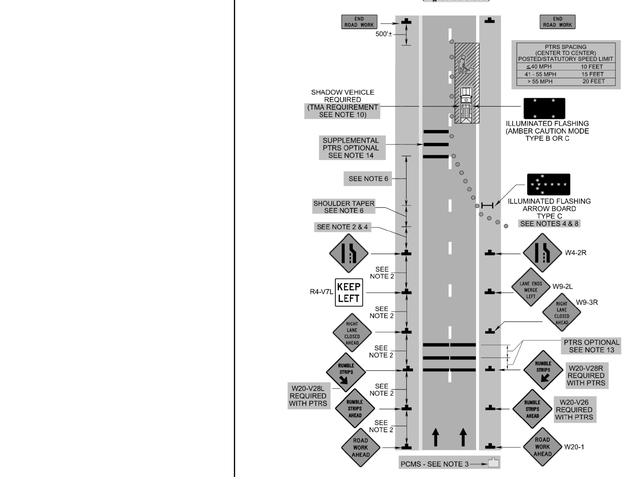
8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
11. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[2] oscillating lights but can be used to supplement the amber rotating, flashing, or[2] oscillating lights.**
12. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

Option:[2]

13. PTRS and their supporting signs may be used, see Sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.[1]
14. The supplemental PTRS may be eliminated.[1]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Outside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-16.2)



2: Revision 2 – 9/1/2019
3: Revision 2.1 -11/1/2020

Typical Traffic Control
Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.2)
NOTES

Standard:

1. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

Guidance:

2. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
3. *When closing a lane, a PCMS should be used in advance of the first warning sign if all of the left side signs cannot be installed.*[1]
4. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*
5. *All vehicles, equipment, workers, and their activities should be restricted to one side of the pavement.*

Standard:

6. **Taper length (L) and channelizing device spacing shall be at the following:**

Taper Length L											
Speed Limit (mph)	Lane Width (Feet)				Remarks	Speed Limit (mph)	Lane Width (Feet)				Remarks
	9	10	11	12			9	10	11	12	
25	95	105	115	125	L=S*W/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=S*W/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=S*W/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=S*W/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Limited Access highways shall use a 1000' merging taper regardless of the posted speed.											
Shifting Tapers see Table 6H-2[1]						Shoulder Taper = ⅓ L Minimum					

7. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing								
Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)	
	0 -35	36 +		0 -35	36 +		0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	* Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

8. **An arrow board shall be used when a lane is closed. When more than one lane is closed, a separate arrow board shall be used for each closed lane (see Figure TTC-18).**
9. **The buffer space length shall be shown in Table 6H-3 on Page 6H-5 for the posted speed limit.**
10. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one high intensity amber rotating, flashing, or[1] oscillating light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck-mounted attenuator shall be used.**
11. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[2] oscillating lights but can be used to supplement the amber rotating, flashing, or[2] oscillating lights.**
12. **When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed as needed.**

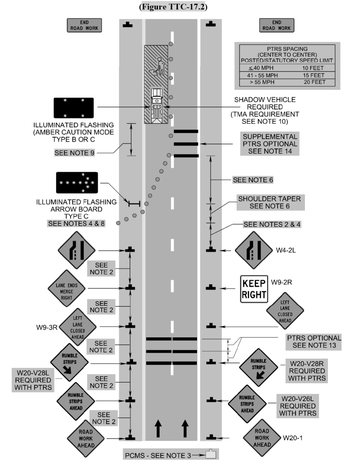
Option:[2]

13. PTRS and their supporting signs may be used, see sections 6F.99 and 6G.25. Long-term transverse rumble strips may be used in long-term situations, see Section 6F.99 and TTC-20.[1]
14. The supplemental PTRS may be eliminated.[1]

1: Revision 1 – 4/1/2015

2: Revision 2 – 9/1/2019

Inside Lane Closure Operation on a Four-Lane Roadway
(Figure TTC-17.2)



2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

Typical Traffic Control
Lane Closure Operation – Near Side of an Intersection
(Figure TTC-26.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **Taper length (L) shall be at the following:**

Taper Length L											
Speed Limit (mph)	Lane Width (Feet)				Remarks	Speed Limit (mph)	Lane Width (Feet)				Remarks
	9	10	11	12			9	10	11	12	
25	95	105	115	125	L=S*W/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=S*W/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=S*W/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=S*W/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Shifting Tapers - full lane width shifts on Limited Access Highways shall use a 750' shifting taper for posted speeds less than 65 mph and a 1000' shifting taper for posted speeds equal to or greater than 65 mph. For all other roadways ⅔ L should be used.[1]											
Shoulder Taper = ⅓ L Minimum											

4. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing								
Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)	
	0 -35	36 +		0 -35	36 +		0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

Guidance:

5. *If room permits, a shadow vehicle with at least one amber[1] rotating, oscillating, or amber strobe light should be parked 80'-120' in advance of the first work crew.*

Standard:

6. **If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator.**
7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or two high intensity amber flashing or oscillating[1] lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Standard:

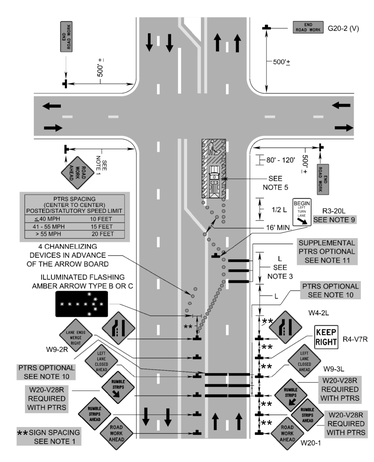
9. **If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used.**[1]

Option:[2]

10. PTRS may be used as shown in Figure TTC-17 and in accordances with Section 6F.99.[1]
11. The supplemental PTRS may be eliminated.[1]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure Operation - Near Side of an Intersection
(Figure TTC-26.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Typical Traffic Control
Lane Closure Operation – Far Side of an Intersection
(Figure TTC-27.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **Taper length (L) shall be at the following:**

Taper Length L											
Speed Limit (mph)	Lane Width (Feet)				Remarks	Speed Limit (mph)	Lane Width (Feet)				Remarks
	9	10	11	12			9	10	11	12	
25	95	105	115	125	L=S*W/60	50	450	500	550	600	L=SW
30	135	150	165	180	L=S*W/60	55	495	550	605	660	L= SW
35	185	205	225	245	L=S*W/60	60	540	600	660	720	L=SW
40	240	270	295	320	L=S*W/60	65	585	650	715	780	L=SW
45	405	450	495	540	L=SW	70	630	700	770	840	L=SW
Shifting Tapers - full lane width shifts on Limited Access Highways shall use a 750' shifting taper for posted speeds less than 65 mph and a 1000' shifting taper for posted speeds equal to or greater than 65 mph. For all other roadways ⅔ L should be used.[1]											
Shoulder Taper = ⅓ L Minimum											

4. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing								
Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)		Location Spacing	Speed Limit (mph)	
	0 -35	36 +		0 -35	36 +		0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile.

Guidance:

5. *If room permits, a shadow vehicle with at least one amber[1] rotating, oscillating, or high intensity flashing[1] light should be parked 80'-120' in advance of the first work crew.*

Standard:

6. **If the posted speed limit is 45 mph or greater, the shadow vehicle shall have a truck-mounted attenuator.**
7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating[1] lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Standard:

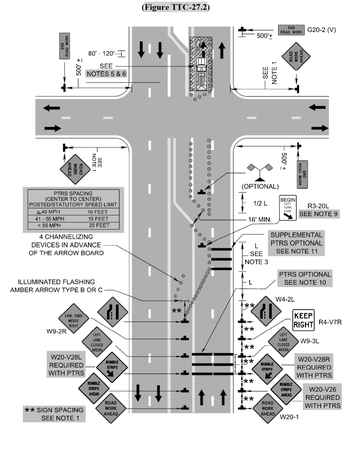
9. **If the left turn lane is closed a NO LEFT TURN (Symbol) (R3-2) shall be used.**[1]

Option:[2]

10. PTRS may be used as shown in Figure TTC-17 and in accordances with Section 6F.99.[1]
11. The supplemental PTRS may be eliminated.[1]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure Operation - Far Side of an Intersection
(Figure TTC-27.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL DATE:	05/27/22
DRAWN BY: DVL DATE:	05/27/22
CHECKED BY: MJK DATE:	05/27/22
APPROVED BY: DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(9)
SCALE: N/A

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

Typical Traffic Control
Lane Closure Operation in an Intersection
(Figure TTC-28.2)
NOTES

Guidance:

1. *The control of traffic through the intersection in order of preference should be:*
   a. *Obtain the services of law enforcement personnel.*
   b. *Detour the effective routes to other roads and streets as approved and directed by the District[1] Traffic Engineer.*
   c. *Place a state certified flagger on each leg of the intersection controlling a single lane of traffic.*

   Appropriate signing as shown should be used for law enforcement and flagging operations. For detour signs see Figure TTC-34.
2. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*
3. *To maintain efficient traffic flow in a flagging operation on a two-lane roadway the maximum time motorist should be stopped at a flagger station is 8 minutes for high volume roadways (average daily traffic of 500 or more vehicles per day) to a maximum of 12 minutes for low volume roadways (less than 500 vehicles per day). For additional information see Section 6E.07.[2]*

Standard:

4. **Channelizing device spacing shall be on 20' centers or less.**
5. **PTRS shall be used as noted in Section 6F.99.[2]**

Guidance:

6. *If room permits, a shadow vehicle with at least one rotating amber light or high intensity amber flashing or oscillating[1] light should be parked 80'-120' in advance of the first work crew.*

Standard:

7. **For emergency situations (any non-planned operation) of 30 minutes or less duration, two rotating amber lights or high intensity amber flashing or oscillating[1] lights mounted on the vehicle and visible for 360° shall be required in addition to the channelizing devices shown around the vehicle. Also, vehicle hazard warning signals shall be used.**

Guidance:

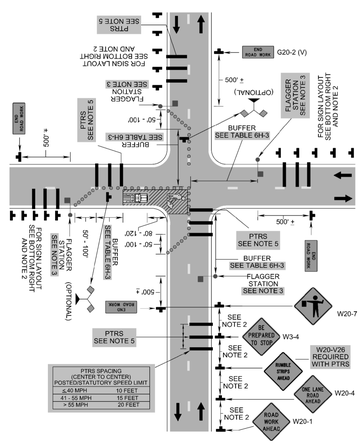
8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Support:

9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Lane Closure Operation in an Intersection
(Figure TTC-28.2)



2: Revision 2 – 9/1/2019

Typical Traffic Control
Turn Lane Closure Operation
(Figure TTC-29.2)
NOTES

Guidance:

1. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, 500'-800' where the posted speed limit is greater than 45 mph.*

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **To prevent accidental intrusion into the work area, channelizing device spacing shall not exceed 10' on centers or as directed by the Engineer.[1]**

Option:

4. This layout may be used for either right or left turn lane closures.
5. For a high volume of turning movements, additional traffic control devices, such as signs (graphic NO LEFT TURN (R3-2) or LEFT LANE MUST TURN LEFT (R3-7L)), channelizing devices and vehicles may be used.

Standard:

6. **Taper length (L) shall be at the following:**

Taper Length L					
Speed Limit (mph)	Lane Width (Feet) 9	10	11	12	Remarks
25	95	105	115	125	L=S*W/60
30	135	150	165	180	L=S*W/60
35	185	205	225	245	L=S*W/60
40	240	270	295	320	L=S*W/60
45	405	450	495	540	L=SW
Shoulder Taper = ⅓ L Minimum					

Taper Length L					
Speed Limit (mph)	Lane Width (Feet) 9	10	11	12	Remarks
50	450	500	550	600	L=SW
55	495	550	605	660	L= SW
60	540	600	660	720	L=SW
65	585	650	715	780	L=SW
70	630	700	770	840	L=SW
Shoulder Taper = ⅓ L Minimum					

7. **Length of the Longitudional Buffer spacing shall be at the following:**

Posted Speed Limit (mph)	Distance (Feet)
≤ 20	115 – 120
25	155 – 165
30	200 – 210
35	250 – 260
40	305 – 325
45	360 – 380

Posted Speed Limit (mph)	Distance (Feet)
50	425 – 445
55	500 – 530
60	570 – 600
65	645 – 675
70	730 – 760

Guidance:

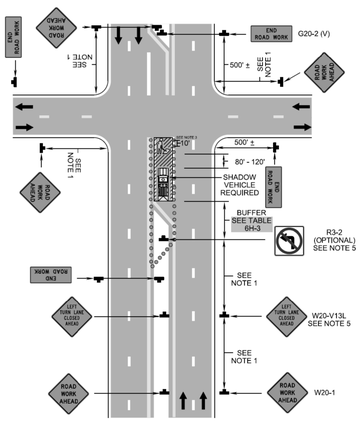
8. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure TTC-36.*

Support:

9. Turns can be prohibited as required by vehicular traffic conditions. Unless the streets are wide, it might be physically impossible to make certain turns, especially for large vehicles.

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Turn Lane Closure Operation
(Figure TTC-29.2)



2: Revision 2 – 9/1/2019

Typical Traffic Control
Inside Lane Closure Operation on a Multi-Lane Roundabout
(Figure TTC-32.2)
NOTES

Support:

1. Each roundabout is unique and the traffic control must be developed to meet the specific conditions of the location and the work operation. A detour could possibly better serve traffic movement and must be consider as an alternative to the flagger operation. This traffic control layout can be used on a traffic circle.

Standard:

2. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
3. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one amber[1] high intensity rotating, oscillating, or flashing[1] light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck- mounted attenuator shall be used.**
4. **Taper length (L) shall be at the following:**

Taper Length L					
Speed Limit (mph)	Lane Width (Feet) 9	10	11	12	Remarks
25	95	105	115	125	L=S*W/60
30	135	150	165	180	L=S*W/60
35	185	205	225	245	L=S*W/60
40	240	270	295	320	L=S*W/60
45	405	450	495	540	L=SW
Shoulder Taper = ⅓ L Minimum					

Taper Length L					
Speed Limit (mph)	Lane Width (Feet) 9	10	11	12	Remarks
50	450	500	550	600	L=SW
55	495	550	605	660	L= SW
60	540	600	660	720	L=SW
65	585	650	715	780	L=SW
70	630	700	770	840	L=SW
Shoulder Taper = ⅓ L Minimum					

5. **Channelizing device spacing shall be at the following:**

Channelizing Device Spacing							
Location Spacing	Speed Limit (mph) 0 -35	36 +	Location Spacing	Speed Limit (mph) 0 -35	36 +	Location Spacing	Speed Limit (mph) 0 -35	36 +
Transition	20'	40'	Travelway	40'	80'	*Construction Access	80'	120'

*Construction access spacing may be increased to this distance, but shall not exceed one access per ¼ mile

6. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[1] oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or[1] oscillating lights.**
7. **On long-term projects where the central island of a roundabout allows for the installation of signs, the Roundabout Directional Arrow (R6-4) shall be used and mounted at least 4 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the traveled way otherwise the R6-4 sign can be installed in the approached islands, see the MUTCD Sections 2B-40 and 2B-48.[1]**

Guidance:

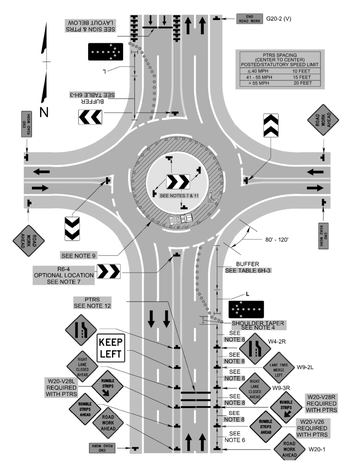
8. *Sign spacing distance should be 350'- 500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
9. *When designing the traffic control and installing the channelizing devices for work activities at roundabouts, accommodations for the turning radius of tractor trailer vehicles and other large vehicles should be considered and the work zone designed accordingly.*

Option:

10. Periodic adjustments to the channelizing devices may be allowed in an active work zone to accommodate the turning movements of tractor trailer vehicles and other large vehicles.
11. The ONEWAY (R6-1R) sign may be installed underneath the R6-4 sign as a supplement.[2]
12. PTRS may be use to enhance the work zone, see Section 6F.99 and TTC-16. Long-term transverse rumble strips may be used to enhance the work zone, see TTC-20 (note 13 and figure).[2]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Inside Lane Closure Operation on a Multi-Lane Roundabout
(Figure TTC-32.2)



2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

Typical Traffic Control
Outside Lane Closure Operation on a Multi-Lane Roundabout
(Figure TTC-33.2)
NOTES

Support:

1. Each roundabout is unique and the traffic control must be developed to meet the specific conditions of the location and the work operation. A detour could possibly better serve traffic movement and must be consider as an alternative to the flagger operation. This traffic control layout can be used on a traffic circle.

Standard:

2. **Multi-lane approaches to the roundabout shall be reduced to one lane and a flagger shall control traffic flow on each approach of the roundabout.**
3. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties. A lead flagger shall be designated and radio communication shall be used by the flaggers.**
4. **Only one quadrant of traffic shall be released at a time.**
5. **Taper length (L) and channelizing device spacing shall be as shown in Note 4 in TTC 32.0.**
6. **At night, flagger stations shall be illuminated, except in emergencies. Street lights and vehicle headlights shall not be used to illuminate the flagger station.**
7. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
8. **A shadow vehicle with either a Type B or C arrow board operating in the caution mode, or at least one amber high intensity rotating, oscillating, or flashing[1] light shall be parked 80'-120' in advance of the first work crew. When the posted speed limit is 45 mph or greater, a truck- mounted attenuator shall be used.**
9. **Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity amber rotating, flashing, or[1] oscillating lights. Vehicle hazard warning signals can be used to supplement high-intensity amber rotating, flashing, or[1] oscillating lights.**
10. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

Guidance:

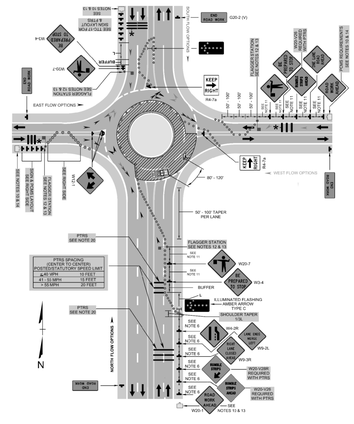
11. *Sign spacing distance should be 350'- 500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*
12. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance to the flagger station, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. Generally speaking, motorists should have a clear line of sight from the graphic flagger symbol sign to the flagger.*
13. *Time limits for stopping traffic by a flagger should be followed, see Section 6E.07.[2]*
14. *A PCMS should be used as part of the traffic control plan to provide clear guidance to motorist on all approaches of the roundabout that must reverse traffic flow.*
15. *When designing the traffic control and installing the channelizing devices for work activities at roundabouts, accommodations for the turning radius of tractor trailer vehicles and other large vehicles should be considered and the work zone designed accordingly.*

Option

16. Periodic adjustments to the channelizing devices may be allowed in an active work zone to accommodate the turning movements of tractor trailer vehicles and other large vehicles.
17. A supplemental flagger may be used in the roundabout island to help direct traffic and may be required on the approaches in advance warning of the flagging operation to slow traffic prior to reaching the flagger station or queued traffic.
18. A guide sign with road names may be used in lieu of the Double Arrow (W12-1) sign.
19. On the approaches where traffic flow will be split, two pilot vehicles may be used to guide traffic through the roundabout.
20. PTRS may be used on multi-lane roadways, see Section 6F.99, TTC-16 and TTC-23.[2]

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Outside Lane Closure Operation on a Multi-Lane Roundabout
(Figure TTC-33.2)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019
3: Revision 2.1 – 11/1/2020

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

MANASSAS, VIRGINIA — Rich in Historic Interest — 1873

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL DATE:	05/27/22
DRAWN BY: DVL DATE:	05/27/22
CHECKED BY: MJK DATE:	05/27/22
APPROVED BY: DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(10)
SCALE: N/A

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

Typical Traffic Control
Street Closure Operation with Detour
(Figure TTC-34.2)
NOTES

Guidance:

1. *This plan should be used for streets without posted route numbers.*
2. *On multi-lane streets, Detour signs with an Advance Turn Arrow should be used in advance of a turn.*
3. *Sign spacing distance should be 225'-275' where the posted speed limit is 30 to 35 mph, and 100'-200' where the posted speed is 25 mph or less.*
4. *If the road is opened for a significant distance beyond the intersection and/or there are significant origin/destination points beyond the intersection, the ROAD CLOSED (R11-2) and Detour Arrow (M4-10) signs on Type 3 Barricades should be located at the corners of intersecting closed roadway or the traveled way.*
5. *In urban areas, signs on an eight foot Type 3 barricade, should not cover more than half of the top two rails. On a four foot Type 3 barricade, a sign should not cover more than the top rail. When used alone on a four foot Type 3 barricade, the ROAD CLOSED (R11-1) sign or the ROAD CLOSED TO THRU TRAFFIC (R11-4) sign should be installed above the Type 3 barricade.*[2]

Option:

6. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
7. Flashing warning lights may be used on Type 3 Barricades.
8. Detour signs may be located on the far side of intersections. A Detour sign with an advance arrow may be used in advance of a turn.
9. A Street Name (M4-VP1a) plaque may be mounted with the Detour sign. The Street Name plaque may be either white on green or black on orange.

Standard:

10. **When used, the Street Name plaque shall be placed above the Detour sign.**

Support:

11. See Chapter 6I for additional information on incident management traffic control.

Typical Traffic Control
Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)
NOTES

Standard:

1. **When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.**
2. **Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.**

Guidance:

3. *Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.*
4. *Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.*
5. *Temporary markings should be considered for operations exceeding three days in duration.*

Option:

6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS (W5-1) signs, may be used to control vehicular traffic.
7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.

Standard:

8. **In order to maintain the systematic use of the fluorescent yellow-green background for school warning signs in a jurisdiction, the fluorescent yellow-green background for school warning signs shall be used in TTC zones.**[1]
9. **All sidewalk closures shall be closed with Type 3 Barricades. The SIDEWALK CLOSED (R9-9) sign and the SIDEWALK CROSS HERE (R9-11) sign shall be installed above the Type 3 Barricade. The KEEP RIGHT sign can cover the top rail of the Type 3 Barricade.**[2]

Support:

10. Refer to Sections 3B-16 through 3B-18 of the 2009 MUTCD and the Virginia Supplement to the MUTCD[1] for crosswalk[1] lines, yield lines and other related TTC devices that may be used to control vehicular traffic at midblock crosswalks.

Standard:[2]

11. **The YIELD HERE TO PEDESTRIANS (R1-5) sign shall be placed at the Yield Line.**
12. **Fluorescent yellow-green PEDESTRIAN TRAFFIC (W11-2) symbol sign, AHEAD (W16-9p) plaque and ARROW (W16-7p) plaque shall be used to identify the work zone crosswalk.**

Typical Traffic Control
Disruption Operation on a Multi-Lane Roadway
(Figure TTC-50.2)
NOTES

Support:

1. Conditions represented are a planned closure not exceeding 15[2] minutes.

Guidance:

2. *On Limited Access highways, the sign spacing distance and flagger distance should be 1300'- 1500'. For all other roadways, the distance between the advance warning signs and between the flagger should be 500'-800' where the posted speed limit is 45 mph or less.*
3. *Care should be exercised when establishing the limits of the work zone to insure maximum possible sight distance in advance of the transition, based on the posted speed limit and at least equal to or greater than the values in Table 6H-3. For Limited Access highways a minimum of 1000' is desired.*
4. *The buffer space length should be as shown in Table 6H-3 on Page 6H-5 for the posted speed limit.*

Standard:

5. **When work is on an undivided highway with a center turn lane the center turn lane shall be closed using channelizing devices spaced at 20 foot intervals.**[2]
6. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**
7. **Flagging stations shall be located far enough in advance of the operation to permit approaching traffic to reduce speed and/or stop before passing into the operation.**
8. **All flaggers shall be state certified and have their certification card in their possession when performing flagging duties and shall follow the procedures noted in Sections 6E.04 and 6E.05.**
9. **At night, flagger stations shall be illuminated, see Section 6E.08.**[2]
10. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

Guidance:

11. *A Portable Changeable Message Sign (PCMS) should be used on Limited Access highways and placed a minimum of one mile in advance of the warning signs warning of the operation ahead (UTILITY WORK AHEAD) and advising of the action required (BE PREPARED TO STOP).*
12. *Disruptions to traffic should be coordinated with all entities involved in advance and performed during off-peak hours to minimize the impact on the motoring public. On Limited Access highways, State Police should assist with the stoppage of traffic.*

Option:

13. A uniformed law enforcement officer may be used for this application in place of the flagger.
14. The ROAD WORK AHEAD (W20-1) sign may be replaced with other appropriate signs such as UTILITY WORK AHEAD (W21-7).

Typical Traffic Control
Signing for Project Limits
(Figure TTC-53.0)
NOTES

Support:

1. This layout depicts signing requirements for notifying motorist when they are entering and exiting a potential construction/maintenance area with a duration equal to or greater than 60 days.

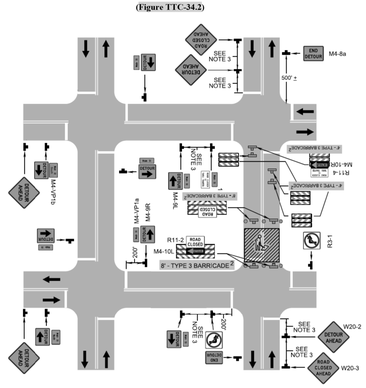
Standard:

2. **The ROAD WORK AHEAD (W20-1) sign or the ROAD WORK NEXT XX MILES (G20-1 (V)) sign shall be placed far enough in advance of the project limits so that other warning signs in a series may be adequately placed prior to the condition they are warning about.**
3. **The ROAD WORK NEXT XX MILES sign shall be used for projects with activity areas greater than 2 miles in length, or when multiple work activities (such as pavement patching, guardrail installations, shoulder restoration, etc.) occur along a highway.**
4. **The distance displayed on the ROAD WORK NEXT XX MILES sign shall be stated to the nearest whole mile from the point of installation to the END ROAD WORK (G20-2 (V)) sign.**
5. **On divided highways having a median wider than 8', right and left sign assemblies shall be required.**

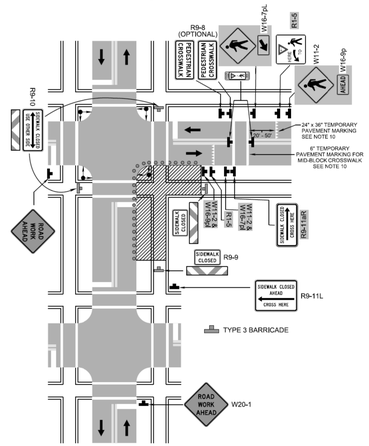
Guidance:

6. *For projects with activity areas 2 miles or less in length, the ROAD WORK AHEAD sign should be the first sign motorist encounter.*
7. *Sign spacing should be 1300'-1500' for Limited Access highways. For all other roadways, the sign spacing should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.*
8. *All connections within the project limits should be identified with signs indicating to motorist they are entering or exiting a potential construction/maintenance area.*

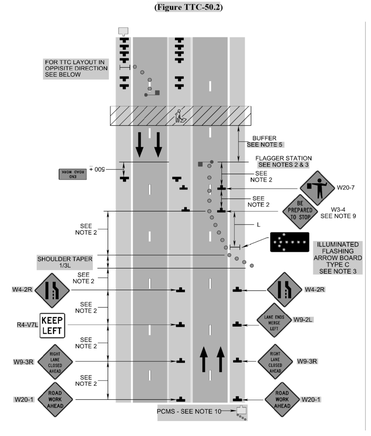
Street Closure Operation with Detour
(Figure TTC-34.2)



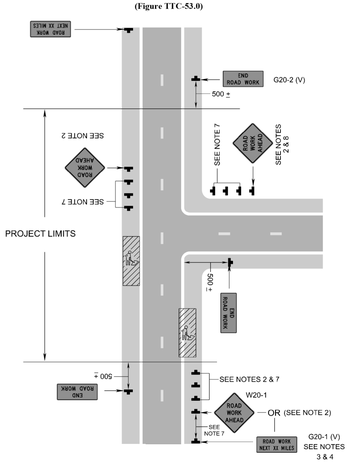
Crosswalk Closure and Pedestrian Detour Operation
(Figure TTC-36.2)



Disruption Operation on a Multi-Lane Roadway
(Figure TTC-50.2)



Signing for Project Limits
(Figure TTC-53.0)



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

SHEET
1E(11)
SCALE: N/A

TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

Typical Traffic Control

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway

(Figure TTC-58.1)

NOTES

Standard:

1. **On divided highways having a median wider than 8', right and left sign assemblies shall be used. Median barrier is considered to be part of the shoulder and its measurement shall be used to determined the total width of the shoulder.**
2. **The maximum pavement edge drop-off shall be 2 inches or less.**
3. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**
4. **A portable changeable message sign with "ROUGH ROAD AHEAD" and other appropriate messages shall be used.**
5. **A BUMP (W8-1) sign shall be placed in advance of the end of the pavement drop-off.[1]**
6. **The District[2] Traffic Engineer shall determine speed reductions.**
7. **The ROUGH ROAD (W8-8), UNMARKED PAVEMENT AHEAD (W8-V4) and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand.[1] Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.**
8. **PAVEMENT AHEAD (W8-V4) and BUMP signs shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Additional ROUGH ROAD and UNMARKED PAVEMENT AHEAD signs shall be installed every 2 miles.**
9. **Where conditions warrant, ROUGH ROAD and BUMP signs shall be installed 350' ± in advance of the affected roadway surface on entrance ramps, and BUMP signs shall be installed 500' ± in advance of unaffected roadway surface on exit ramps.**
10. **All signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:

11. *For sign spacing distances see Table 6H-5.*

Option:

12. Only traffic control signing for partial pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
13. Temporary pavement markers spaced at 10 foot centers for two-way traffic centerlines or three per skip line for lane division lines may be added as directed by the engineer.
14. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

15. **If used, the LOW SHOULDER sign shall be repeated at 1 mile intervals if the condition extends over a distance in excess of 1 mile.**
16. **The SHOULDER DROP OFF (W8-V5) sign shall be used when an unprotected shoulder drop-off, adjacent to the travel lane, exceeds 2 inches depth between the shoulder and the travel lane. Where the condition extends over a distance in excess of 1 mile, the sign shall be repeated at 1 mile intervals.**

Option:

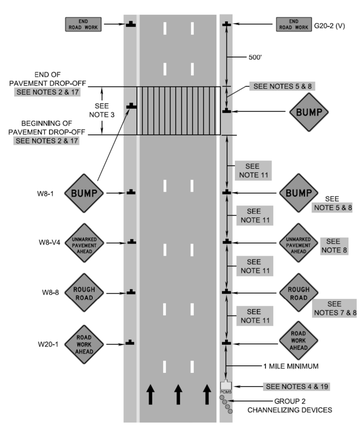
17. The SHOULDER DROP OFF sign may be eliminated if a 6:1 (desirable) to 4:1 (minimum) wedge is used between the travel lane and the shoulder.

Standard:

18. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.**
19. **A minimum of four (4) drum channelizing devices shall be placed on the shoulder in advance of the PCMS in a taper for delineation (see Figure 6F-6).**

1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

End of Day Signing for Full Paving Operations on a Multi-Lane Roadway
(Figure TTC-58.1)



1: Revision 1 – 4/1/2015
2: Revision 2 – 9/1/2019

Typical Traffic Control

End of Day Signing for Paving Operations on a Two-Lane Roadway

(Figure TTC-59.1)

NOTES

Standard:

1. **Open travel lane(s) shall not be exposed to more than 2 to 3 mile sections of milled or uneven surface.**
2. **The maximum pavement edge drop-off shall be 2 inches or less.**
3. **NO CENTER LINE (W8-12) sign shall be installed whenever the centerline has been obliterated or until permanent pavement markings have been installed. The sign shall be installed in both directions when the centerline is not present. In addition, NO CENTER LINE signs shall be installed every mile if the unmarked area is less than 3 miles, or every 2 miles if the unmarked area is longer than 4 miles.**
4. **A DO NOT PASS (R4-1) sign shall be used when the centerline has been obliterated or until pavement markings have been installed. The DO NOT PASS sign shall be installed after the NO CENTER LINE sign and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Thereafter the DO NOT PASS sign shall be installed every mile if the unmarked area is less than 3 miles or every 2 miles if the unmarked area is longer than 4 miles.**
5. **In the vicinity of a turning lane a BUMP (W8-1) sign shall be installed.**
6. **The UNEVEN LANES (W8-11) sign and BUMP sign shall be adjusted daily with the work operation and their sign stand shall be supported with a sand bag weighing approximately 25-pounds on each leg or two (2) drum collar weights positioned on the center of the sign stand[1]. Additional UNEVEN LANES signs shall be installed every mile.**
7. **Signs shall be post-mounted at locations after 72 consecutive hours of non-work activities.**

Guidance:[1]

8. *Sign spacing distance should be 350'-500' where the posted speed limit is 45 mph or less, and 500'-800' where the posted speed limit is greater than 45 mph.*

Option:[1]

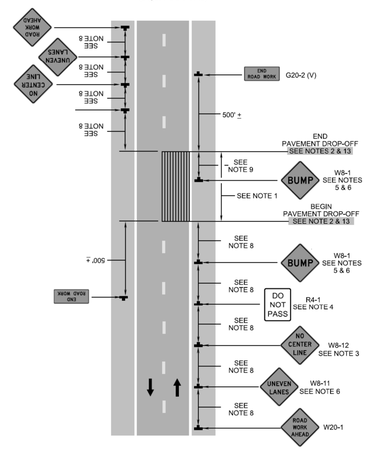
9. Only traffic control signing for pavement resurfacing is shown. Other devices may be used for the control of traffic through the work area.
10. The LOW SHOULDER (W8-9) sign may be used to warn of a shoulder condition where there is an elevation difference of less than 2 inches between the shoulder and the travel lane.

Standard:

11. **The LOW SHOULDER sign shall be repeated at 1 mile intervals where there is an elevation difference of less than 2 inches between the shoulder and the travel lane extends over a distance in excess of 1 mile.**
12. **If pavement marking cannot be installed in accordance with Section 704.03 of the Road and Bridge Specifications, then yellow temporary pavement markers spaced at 10 foot centers for two-way traffic shall be placed along the centerline for lane division. No edge markers will be required.**
13. **A temporary pavement wedge shall be constructed of surface mix asphalt a minimum of three (3) feet in length for every inch of depth of pavement milling on the approach and departure end of the milled travel lane(s). Refer to Standard ACOT-1 of the Road and Bridge Standards for details.**

1: Revision 1 – 4/1/2015

End of Day Signing for Paving Operations on a Two-Lane Roadway
(Figure TTC-59.1)



1: Revision 1 – 4/1/2015

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

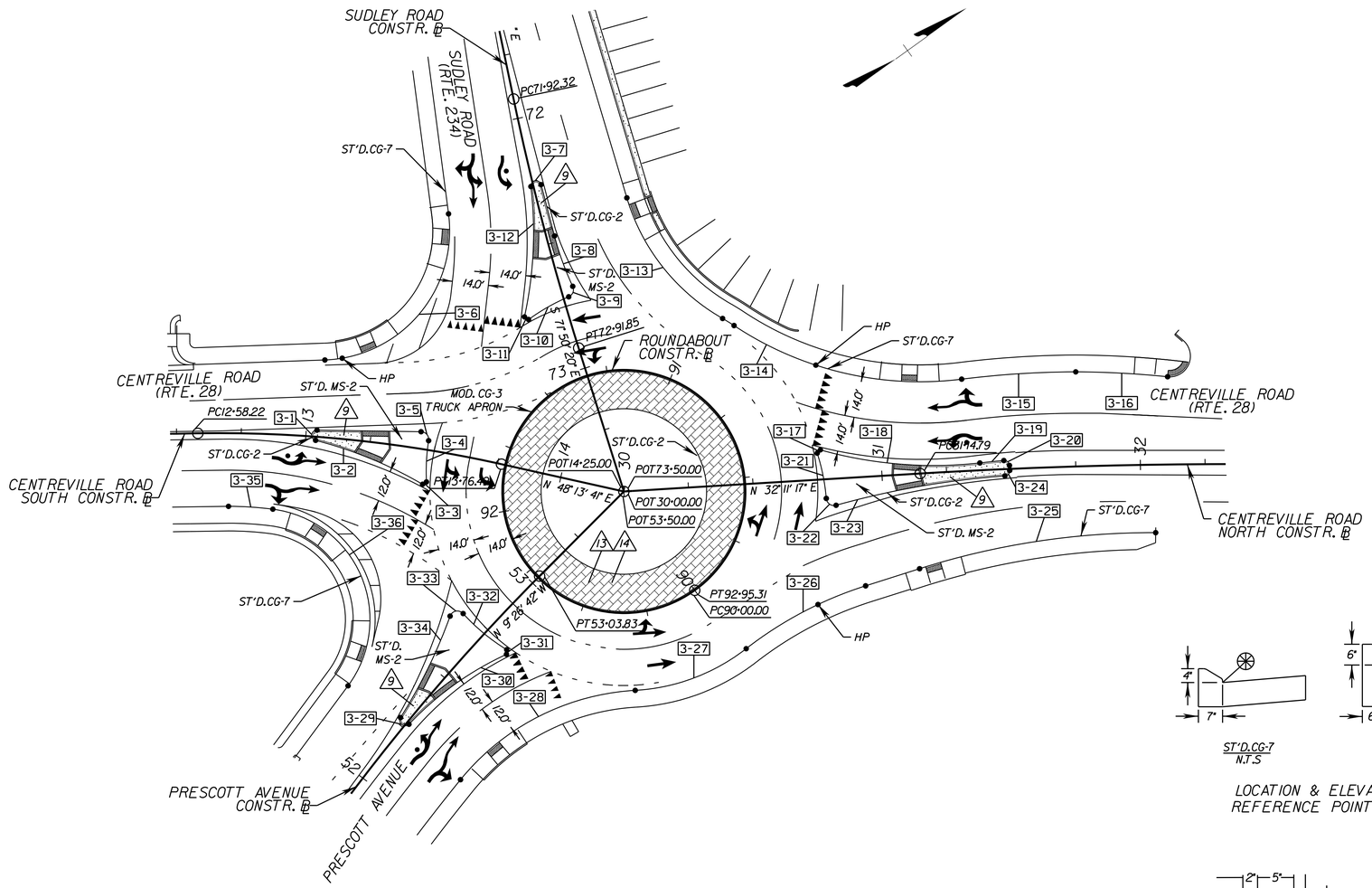
TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION

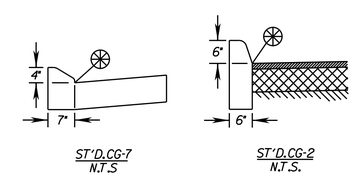
SHEET
1E(12)
SCALE: N/A

ROUNDABOUT DETAILS

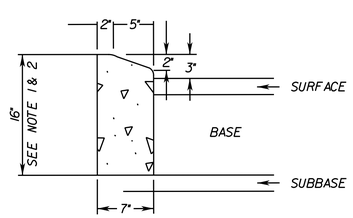
REF. NO.		LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
CURVE	POINT	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
3-1	PRC	CENTREVILLE ROAD SOUTH	13+03.91	1.41	308.94	2.00	3.97	5.81
	PT		13+04.14	2.55	308.91			
3-2	PRC	CENTREVILLE ROAD SOUTH	13+03.91	1.41	308.94	162.00	44.71	44.85
	PRC		13+47.64	13.42	309.36			
3-3	PRC	CENTREVILLE ROAD SOUTH	13+47.64	13.42	309.36	1.00	1.76	2.15
	PRC	ROUNDABOUT	91+89.96	29.42	309.39			
3-4	PRC	ROUNDABOUT	91+89.96	29.42	309.39	77.00	15.99	15.96
	PRC		91+80.27	31.00	309.25			
3-5	PC	CENTREVILLE ROAD SOUTH	13+43.85	6.56	309.15	3.00	5.14	4.53
	PRC	ROUNDABOUT	91+80.27	31.00	309.25			
3-6	PC	CENTREVILLE ROAD SOUTH	13+05.10	29.83	308.24	50.00	83.32	74.01
	HP	CENTREVILLE ROAD SOUTH	13+11.34	31.07	308.25			
	PC	SUDLEY ROAD	72+29.38	34.42	307.33			
3-7	PRC	SUDLEY ROAD	72+26.79	0.96	308.24	2.00	6.06	3.99
	PT		72+27.01	3.03	308.19			
3-8	PC	SUDLEY ROAD	72+47.57	3.11	308.13	112.00	20.75	20.72
	PRC		72+68.31	4.70	308.16			
3-9	PRC	SUDLEY ROAD	72+68.31	4.70	308.16	3.00	4.84	4.33
	PRC	ROUNDABOUT	91+31.39	31.22	308.29			
3-10	PRC	ROUNDABOUT	91+31.39	31.22	308.29	77.00	17.88	17.84
	PRC		91+42.20	29.01	308.44			
3-11	PRC	ROUNDABOUT	91+42.20	29.01	308.44	1.00	2.42	1.87
	PRC	SUDLEY ROAD	72+74.36	16.51	308.42			
3-12	PRC	SUDLEY ROAD	72+26.79	0.96	308.24	153.00	50.67	50.39
	PRC		72+74.36	16.51	308.42			
3-13	PC	SUDLEY ROAD	72+40.32	33.93	307.52	80.00	59.53	61.00
	PT	ROUNDABOUT	90+94.03	30.00	308.73			
3-14	PC	ROUNDABOUT	90+90.85	30.00	308.82	130.00	90.41	92.34
	HP	CENTREVILLE ROAD NORTH	30+77.03	44.26	309.16			
	PRC	CENTREVILLE ROAD NORTH	31+32.68	35.53	308.80			
3-15	PRC	CENTREVILLE ROAD NORTH	31+32.68	35.53	308.80	368.00	44.20	44.23
	PCC		31+76.09	36.55	308.49			
3-16	PCC	CENTREVILLE ROAD NORTH	31+76.09	36.55	308.49	365.00	35.57	35.59
	PRC		32+10.95	33.92	308.23			
3-17	PRC	ROUNDABOUT	90+53.78	29.22	309.94	1.00	1.76	2.16
	PRC	CENTREVILLE ROAD NORTH	30+76.82	11.47	309.70			
3-18	PRC	CENTREVILLE ROAD NORTH	30+76.82	11.47	309.70	162.00	61.87	62.25
	PRC		31+38.03	2.83	309.49			

REF. NO.		LOCATION				RADIUS	CHORD LENGTH	CURVE LENGTH
CURVE	POINT	REFERENCE BASELINE	STATION	OFFSET	ELEVATION	FEET	FEET	FEET
3-19	PCC	CENTREVILLE ROAD NORTH	31+38.03	2.83	309.49	335.00	9.32	9.32
	PRC		31+47.32	3.34	309.45			
3-20	PRC	CENTREVILLE ROAD NORTH	31+47.32	3.34	309.45	2.00	2.88	3.22
	PT		31+49.40	1.35	309.95			
3-21	PRC	ROUNDABOUT	90+53.78	29.22	309.94	77.00	17.85	17.89
	PRC		90+42.97	31.31	309.86			
3-22	PRC	ROUNDABOUT	90+42.97	31.31	309.86	3.00	4.63	5.29
	PRC	CENTREVILLE ROAD NORTH	30+81.59	10.28	309.76			
3-23	PRC	CENTREVILLE ROAD NORTH	30+81.59	10.28	309.76	330.00	66.36	66.25
	PRC		31+47.47	2.61	309.46			
3-24	PRC	CENTREVILLE ROAD NORTH	31+47.47	2.61	309.46	2.00	2.80	3.10
	PT		31+49.42	0.60	309.95			
3-25	PC	CENTREVILLE ROAD NORTH	31+12.34	36.71	308.83	298.00	92.34	92.72
	PT		32+05.52	26.28	308.41			
3-26	PT	CENTREVILLE ROAD NORTH	30+91.10	42.05	308.94	148.00	52.17	52.45
	HP	ROUNDABOUT	90+19.81	39.86	309.02			
	PRC	ROUNDABOUT	90+01.84	30.00	308.76			
3-27	PRC	ROUNDABOUT	90+01.84	30.00	308.76	77.00	45.84	46.54
	PRC		92+68.74	30.00	308.38			
3-28	PRC	ROUNDABOUT	92+68.74	30.00	308.38	94.00	75.86	78.08
	PC	PRESCOTT AVENUE	52+23.37	30.00	309.13			
3-29	PRC	PRESCOTT AVENUE	52+27.32	3.15	309.63	2.00	4.18	6.09
	PRC		52+27.40	1.03	309.67			
3-30	PRC	PRESCOTT AVENUE	52+27.40	1.03	309.67	122.00	46.35	46.63
	PRC		52+72.92	11.68	308.88			
3-31	PRC	PRESCOTT AVENUE	52+72.92	11.68	308.88	1.00	1.77	2.16
	PRC	ROUNDABOUT	92+36.11	29.11	308.92			
3-32	PRC	ROUNDABOUT	92+36.11	29.11	308.92	77.00	21.90	21.98
	PRC		92+22.76	31.02	309.15			
3-33	PRC	ROUNDABOUT	92+22.76	31.02	309.15	3.00	5.14	6.18
	PRC	PRESCOTT AVENUE	52+69.06	14.35	309.08			
3-34	PRC	PRESCOTT AVENUE	52+69.06	14.35	309.08	202.00	43.62	43.71
	PRC		52+27.32	3.15	309.63			
3-35	PC	CENTREVILLE ROAD SOUTH	12+70.29	28.30	308.11	134.00	17.18	17.19
	PCC		12+88.49	28.94	308.19			
3-36	PCC	CENTREVILLE ROAD SOUTH	12+88.49	28.94	308.19	43.00	74.22	89.54
	PT	PRESCOTT AVENUE	52+24.03	26.63	309.05			





LOCATION & ELEVATION REFERENCE POINT "⊛"



MODIFIED CG-3
N.T.S.

NOTES:

1. THE DEPTH OF THE CURB MAY BE REDUCED AS MUCH AS 3" (13" DEPTH) OR INCREASED AS MUCH AS 3" (19" DEPTH) IN ORDER FOR THE BOTTOM OF THE CURB TO COINCIDE WITH THE TOP COURSE OF THE PAVEMENT SUBSTRUCTURE; OTHERWISE. THE DEPTH IS TO BE 16" AS SHOWN. NO ADJUSTMENT IN THE PRICE BID IS TO BE MADE FOR AN INCREASE OR DECREASE IN DEPTH.

2. THE MODIFICATION TO THE STANDARD CG-3 IS TO REDUCE THE EXPOSED HEIGHT OF THE CURB AS SHOWN. MODIFIED CURB SHALL BE PAID FOR AS STANDARD CG-3.

3. REFER TO SHEET 3E FOR ROUNDABOUT PROFILE AT FACE OF CURB

4. ANY NON-RECTANGULAR SLABS SHALL BE REINFORCED TO MINIMIZE CRACKING POTENTIAL

9 VDOT St'd. MS-1A Req'd.

13 Stamped Cement Concrete Finish

14 Truck Apron

GRAPHIC SCALE

25' 0' 25' 50'

1" = 25'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

MANASSAS, VIRGINIA 1873 Rich in Historic Interest

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

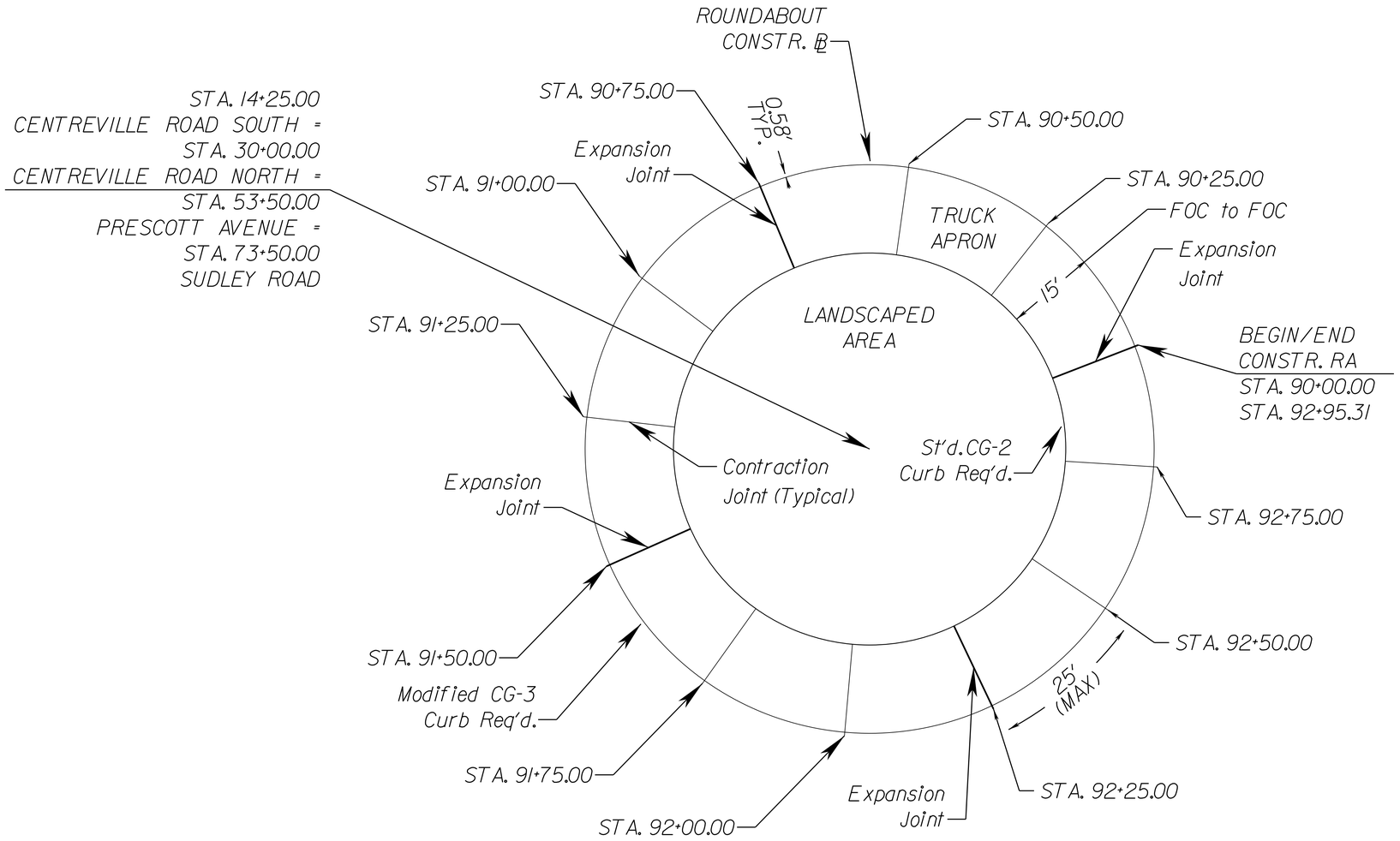
MANASSAS PROJECT NO:	T-085		
DATE OF PLAN ISSUANCE:	TBD		
CONSULTANT PROJECT ID:	RK&K		
DESIGNED BY:	DVL	DATE:	05/27/22
DRAWN BY:	DVL	DATE:	05/27/22
CHECKED BY:	MJK	DATE:	05/27/22
APPROVED BY:		DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

ROUNDABOUT DETAILS

SHEET
1F(1)
SCALE 1"=25'

ROUNDABOUT DETAILS



TRUCK APRON JOINT DETAIL
N.T.S.

NOTES:

1. CONSTRUCT ROUNDABOUT SHOULDER SLABS AS SHOWN ABOVE. NOTE: MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS 25'.

2. EXPANSION JOINTS SHALL CONFORM TO SHEETS 301.01, 301.02, & 301.03 OF THE 2016 ROAD AND BRIDGE STANDARDS

3. STATIONS AND OFFSETS REFER TO THE ROUNDABOUT BASELINE OF CONSTRUCTION

4. SEE TYPICAL SECTION SHEET 2A(3) FOR TRUCK APRON BUILD UP.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

ROUNDABOUT DETAILS

SHEET
1F(2)
SCALE N/A

EROSION & SEDIMENT CONTROL PLAN

PROJECT DESCRIPTION:

THE TOTAL PROJECT AREA IS 1.9 ACRES AND CONSISTS OF OPERATIONAL IMPROVEMENTS TO THE INTERSECTION OF SUDLEY ROAD/PRESCOTT AVENUE AND CENTEVILLE ROAD. THE INTERSECTION WILL BE UPGRADED TO A ROUNDABOUT WITH PEDESTRIAN ACCOMODATIONS, AS WELL AS LIGHTING AND DRAINAGE IMPROVEMENTS. IN THE EXISTING CONDITION, THE SITE IS PAVED, WITH LANDSCAPING SEPARATING THE RIGHT-OF-WAY AND ADJACENT COMMERCIAL PROPERTIES. THE SITE IS RELATIVELY FLAT, ALL WATER DRAINS TO THE STORM SEWER TRUNK LINE RUNNING SOUTHWEST ALONG CENTREVILLE ROAD.

ADJACENT AREAS:

THE AREAS ADJACENT TO THIS PROJECT ARE COMMERCIAL. THIS PROJECT DOES NOT PROPOSE ANY OFF-SITE WORK. IN THE EVENT THAT THE CONTRACTOR SHOULD DEEM ANY OFF-SITE WORK IS NECESSARY THEN ALL NECESSARY EASEMENTS AND PERMITS ARE TO BE OBTAINED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ACCEPTABLE BORROW AND/OR DISPOSAL SITES, AND THESE SHALL BE IN ACCORDANCE WITH VDOT REGULATIONS.

SOILS:

ONSITE SOILS CONSIST OF URBAN LAND - UDORTHENTS (54B). SEE SOILS MAP AND TABLE ON THIS SHEET.

CRITICAL AREAS:

THE PROJECT AREA IS OUTSIDE THE FLOODPLAIN, AND RESOURCE PROTECTION AREA (RPA). ALL SLOPES ARE LESS THAN CRITICAL.

EROSION AND SEDIMENT CONTROL MEASURES:

UNLESS OTHERWISE NOTED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MOST CURRENT MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH). ALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.

TEMPORARY & PERMANENT STABILIZATION:

TEMPORARY AND PERMANENT STABILIZATION SHALL BE DONE IN ACCORDANCE WITH THE VESCH. TEMPORARY SEEDING WILL FOLLOW IMMEDIATELY AFTER GRADING. IN ALL SEEDING OPERATIONS, SEED, FERTILIZER, AND LIME WILL BE APPLIED PRIOR TO MULCHING. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISHED GRADING. EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL THE GRASS IS ESTABLISHED. PERMANENT SEEDING MIXTURES SHALL CONFORM TO TABLE 3.32-D OF THE VESCH.

GENERAL NOTES:

1. LAND DISTURBING ACTIVITY WHICH OCCURS WITHIN THE VDOT RIGHT-OF-WAY MUST BE SUPERVISED BY PERSONNEL MEETING THE REQUIREMENTS OF VDOT ROAD AND BRIDGE SPECIFICATION 107.16 (A).

2. THE CITY IS RESPONSIBLE FOR COMPLYING WITH APPLICABLE LOCAL, STATE, AND FEDERAL ENVIRONMENTAL LAWS AND REGULATIONS, INCLUDING ACQUIRING CLEARANCES/AUTHORIZATIONS FROM APPROPRIATE REGULATORY AGENCIES.

3. ALL E&S CONTROLS SHALL BE REMOVED WITHIN 30 DAYS AFTER PROJECT IS STABILIZED.

4. IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED DAILY AND AFTER EACH SIGNIFICANT RAINFALL.

5. THE JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION, DAILY INSPECTION, AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.

SOURCE: PRINCE WILLIAM COUNTY MAPPER, OFFICIAL 2022.

SOILS MAP
N.T.S.

SOILS TABLE

SOIL ID NUMBERS	SOIL SERIES NAME	SOIL DRAINAGE	EROSION	HSG
54B	URBAN LAND – UDORTHENTS	N/A	N/A	N/A

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: MJD DATE: 05/27/22
DRAWN BY: MJD DATE: 05/27/22
CHECKED BY: TJS DATE: 05/27/22
APPROVED BY: ____ DATE: ____

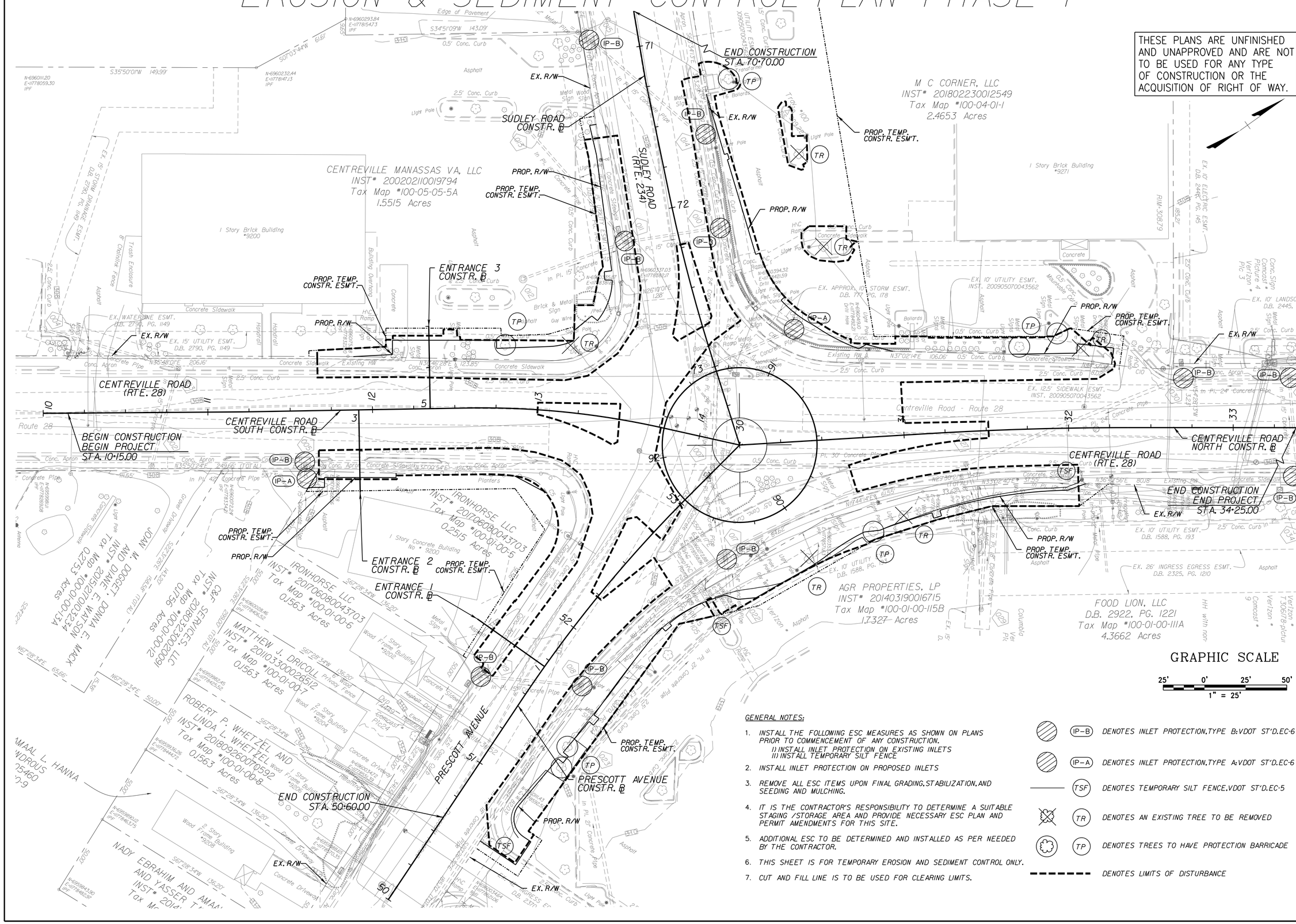
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

EROSION & SEDIMENT CONTROL PLAN

SHEET
1G(1)
SCALE: N/A

EROSION & SEDIMENT CONTROL PLAN PHASE I

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



GENERAL NOTES:

1. INSTALL THE FOLLOWING ESC MEASURES AS SHOWN ON PLANS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
   I) INSTALL INLET PROTECTION ON EXISTING INLETS
   II) INSTALL TEMPORARY SILT FENCE
2. INSTALL INLET PROTECTION ON PROPOSED INLETS
3. REMOVE ALL ESC ITEMS UPON FINAL GRADING, STABILIZATION, AND SEEDING AND MULCHING.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE A SUITABLE STAGING /STORAGE AREA AND PROVIDE NECESSARY ESC PLAN AND PERMIT AMENDMENTS FOR THIS SITE.
5. ADDITIONAL ESC TO BE DETERMINED AND INSTALLED AS PER NEEDED BY THE CONTRACTOR.
6. THIS SHEET IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL ONLY.
7. CUT AND FILL LINE IS TO BE USED FOR CLEARING LIMITS.

	IP-B	DENOTES INLET PROTECTION, TYPE B: VDOT ST'D. EC-6
	IP-A	DENOTES INLET PROTECTION, TYPE A: VDOT ST'D. EC-6
	TSF	DENOTES TEMPORARY SILT FENCE, VDOT ST'D. EC-5
	TR	DENOTES AN EXISTING TREE TO BE REMOVED
	TP	DENOTES TREES TO HAVE PROTECTION BARRICADE
		DENOTES LIMITS OF DISTURBANCE

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: M.D.	DATE: 05/27/22
DRAWN BY: M.D.	DATE: 05/27/22
CHECKED BY: T.S.	DATE: 05/27/22
APPROVED BY:	DATE:

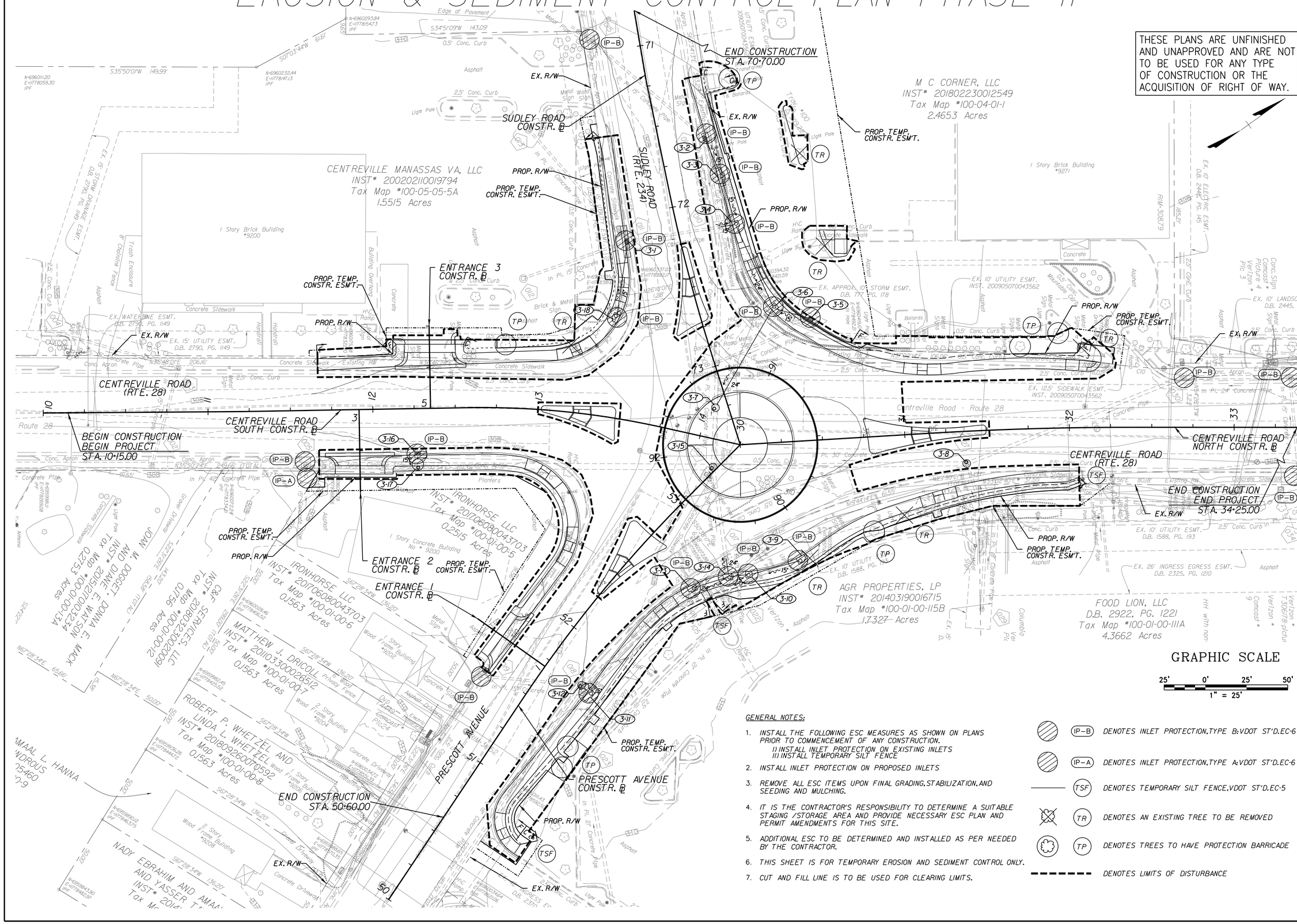
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

EROSION & SEDIMENT CONTROL PLAN

SHEET
1G(2)
SCALE 1"=25'

EROSION & SEDIMENT CONTROL PLAN PHASE II

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



GENERAL NOTES:

1. INSTALL THE FOLLOWING ESC MEASURES AS SHOWN ON PLANS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION.
   I) INSTALL INLET PROTECTION ON EXISTING INLETS
   II) INSTALL TEMPORARY SILT FENCE
2. INSTALL INLET PROTECTION ON PROPOSED INLETS
3. REMOVE ALL ESC ITEMS UPON FINAL GRADING, STABILIZATION, AND SEEDING AND MULCHING.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE A SUITABLE STAGING /STORAGE AREA AND PROVIDE NECESSARY ESC PLAN AND PERMIT AMENDMENTS FOR THIS SITE.
5. ADDITIONAL ESC TO BE DETERMINED AND INSTALLED AS PER NEEDED BY THE CONTRACTOR.
6. THIS SHEET IS FOR TEMPORARY EROSION AND SEDIMENT CONTROL ONLY.
7. CUT AND FILL LINE IS TO BE USED FOR CLEARING LIMITS.

	IP-B	DENOTES INLET PROTECTION, TYPE B: VDOT ST'D. EC-6
	IP-A	DENOTES INLET PROTECTION, TYPE A: VDOT ST'D. EC-6
	TSF	DENOTES TEMPORARY SILT FENCE, VDOT ST'D. EC-5
	TR	DENOTES AN EXISTING TREE TO BE REMOVED
	TP	DENOTES TREES TO HAVE PROTECTION BARRICADE
		DENOTES LIMITS OF DISTURBANCE

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: M.J.D.	DATE: 05/27/22
DRAWN BY: M.J.D.	DATE: 05/27/22
CHECKED BY: T.J.S.	DATE: 05/27/22
APPROVED BY:	DATE:

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

EROSION & SEDIMENT CONTROL PLAN

SHEET
1G(3)
SCALE 1"=25'

STORMWATER POLLUTION PREVENTION PLAN

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2019 and ~~VDOT's~~ City of Manassas approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance activities that disturb an area equal to or greater than 10,000 square feet outside the Chesapeake Bay Preservation Area, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The ~~VDOT~~ RLD (as defined in the latest IIM 242) will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents)for the land disturbance (construction) activity.

I certify under penalty of law that I have read and understand this document and that this document and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I further certify that this document and all other documents related to the SWPPP, as identified on the SWPPP General Information Sheets, are maintained at the activity site, or at a location convenient to the activity site where no on-site facilities are available, and such documents will be made available for review upon request in accordance with the provisions of the General VPDES Permit for Discharges of Stormwater from Construction Activities (VAR10) when applicable. Where the SWPPP documents are not stored on-site, a copy of such documents shall be in the possession of those with day to day operational control over the implementation of the SWPPP whenever they are on site.

* or ** Delegated Authority Signature"

Signature: _____
Printed Name: _____
Date:_____

(1) See Section 1, Item 11 relating to delegation of authority, and form LD-445H (Delegation of Authority).

ACRONYMS

CBPA - Chesapeake Bay Preservation Act
BMP - Best Management Practice
DEQ - Department of Environmental Quality
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
R&B - Road and Bridge
RLD - Responsible Land Disturber
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
VDOT - Virginia Department of Transportation
VPDES - Virginia Pollutant Discharge Elimination System
VSMP - Virginia Stormwater Management Program
VESCP - Virginia Erosion and Sediment Control Program
WLA - Waste Load Allocation
SWM - Stormwater Management

SECTION I GENERAL INFORMATION

1. Activity Description - (insert appropriate text)

2. This land disturbance (construction) activity site is located in the City of Manassas and approximately 1.19 acres will be disturbed by excavation, grading or other construction activities.

3. (Include one of the following notes as appropriate)

A. This proposed activity disturbs one acre or greater and requires coverage under the VPDES General Permit for Discharges Of Stormwater from Construction Activities (the VPDES Construction Permit) as issued by the DEQ. A copy of the VPDES Construction Permit (VAR10), the registration information ~~(LD-445 & LD-445C forms)~~ and the permit coverage letter received from DEQ shall be maintained with other SWPPP documents for this land disturbing activity.

~~B. This proposed activity disturbs less than one acre and is exempt from coverage under the VPDES General Permit for Discharges of Stormwater from Construction Activities (the VPDES Construction Permit) as issued by the DEQ.~~

~~C.This proposed activity is exempt from coverage under the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES ConstructionPermit) as issued by the DEQ because it is considered a routine maintenance activity (i.e., the proposed activity is intended to maintain the original line and grade, hydraulic capacity or original construction of the project or involves the paving of an existing roadway with a compacted or impervious surface and the reestablishment of associated ditches and shoulders).~~

** 4. The location of on-site support facilities that will be covered under the VPDES Construction Permit coverage for this land disturbance (construction) activity shall be provided by the contractor and identified on the record set of plans or in other appropriate contract documents. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

** 5. Written Evidence of permit coverage shall be provided by the contractor for all support activities located outside of City of Manassas right of way or easement in the form of the Construction General Permit coverage letter: (List VPDES Permit * or Letter from VSMP Authority stating coverage not needed)

6. List the surface waters that have been identified as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report for sediment, total suspended solids, turbidity, Nitrogen or Phosphorus. These pollutants are considered benthic impairments: Chesapeake Bay

7. Identify the TMDL's where stormwater from construction activities discharges into a watershed with a TMDL waste load allocation established and approved by the State Water Control Board prior to July 1, 2016 for sediment, total suspended solids, turbidity, nitrogen or phosphorus: Chesapeake Bay: TSS, nitrogen, phosphorus

8. This land disturbance activity discharges stormwater to the following surface waters that have been identified as exceptional in Section 9VAC25-260-30 A 3 c of the Virginia Administrative Code: N/A

9. Locations of surface waters and locations where concentrated stormwater is discharged from this land disturbance (construction) activity are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity. (List name of surface waters and locations here if not shown in construction plan or other such documents).

10. The ESC and SWM plans (where applicable) for this land disturbance (construction) activity have been developed in accordance with ~~VDOT's~~ City of Manassas Approved Annual Erosion and Sediment Control and Stormwater Management Standards and Specifications as approved by the DEQ.

11. List the RLD and other responsible parties for the land disturbance activity: (required for erosion and sediment control). The following individual(s) have "delegated authority" to sign all reports required by the construction permit including the SWPPP General Information Sheets and Inspection Reports (C-107). Reference ~~form LD-445H for delegation of authority (form 445H for the project is hereby incorporated by reference into this SWPPP).~~ These individual(s) has/have overall responsibility or the environmental matters for the project: (required only for permitted projects):

Name	Position	Responsibility
	RLD	Certify the SWPPP (with date & sig.)
	Certified Inspector	Sign (C-107) Inspection Form Part 1
	Certified Inspector	Sign (C-107) Inspection Form Part 2

* 12. The name of the ~~VDOT~~ individual(s) responsible for the oversight inspection in accordance with IIM-LD-256 on these land disturbance construction activities as identified on these SWPPP General Information Sheets. The names will be updated and maintained with the other SWPPP documents for this land disturbance activity.

~~VDOT~~ Individuals	Position	Responsibility
	NPDES	NPDES coordinator responsible for the oversight inspection in accordance with IIM-LD-256
	~~Dist. Hyd. Engineer~~	~~District Hydraulic Engineer or designee(s) responsible for the review & the coordination approval of ESC SWM plan modification(s).~~

* 13. The ESC and P2 inspections for this land disturbing (construction) activity shall follow (Select Schedule 1 or 2, if schedule *2 is used, void note *14) as defined in 2016 R&B Specifications except for Section 107.16(e) 4.an Inspection Requirements Rain gauge notes apply only to Inspection Schedule 1.

** 14. The location of the on-site rain gage that will be used to determine the occurrence of a measurable storm event for the purposes of ESC and Pollution Prevention inspections will be provided by the contractor and identified on the record set of plans or in other appropriate SWPPP documents for this land disturbance activity:
(List location of rain gage).

The rain gage shall be observed daily at "_____" to determine the occurrence of a measurable storm event (i.e., 0.25 inches of rainfall or greater in a 24 hour period). A log book shall be maintained to record observation information which shall include (1) the date, (2) the time, (3) whether or not rainfall is occurring at the time of the observation, (4) the amount of accumulated rainfall in the gage, if any, and (5) whether or not an inspection is required based on the amount of accumulated rainfall in the gage.
If there is no rainfall occurring at the time of the observation, the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.
If there is rainfall occurring at the time of the observation, the observation information is to be noted in the log book. The rain gage is not to be emptied but left to accumulate additional rainfall until the conclusion of the rainfall event. At the conclusion of the rainfall event, an observation of the rain gage shall be made and the observation information shall be noted in the log book and the rain gage emptied and replaced. An inspection is required if there is 0.25 inches or more accumulation noted in the rain gage.

15. The following VDOT documents are applicable to a) permitted projects b) non-permitted projects in Chesapeake Bay Preservation Areas (CBPA) with 2,500 S.F. to 1.0 acre of land disturbance c) non-permitted projects requiring a SWPPP and d) Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP:

VDOT LD-445: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP and ESC projects > 10,000 s.f. but <1 acre.
VDOT LD-445A: Permitted projects only.
VDOT LD-445C: Projects that require a permit, ESC Plan, or SWPPP.
VDOT LD-445D: Permitted projects, CBPA projects and Non-permitted, Non-CBPA with BMP projects that have a water quantity BMP.
VDOT LD-445F: Emergency work projects (when applicable).
Water Quality Requirement (when applicable)
VDOT LD-445H: Permitted projects only.
VDOT C-107 Part I and Part II. All projects that require a permit or SWPPP.
VDOT LD-445I: AS&S Approval Form (when applicable)

16. If there is an excessive loading of sediment from the project (i.e. more than to be expected from the project with an implemented ESC plan) that is discovered within a local watershed with a sediment TMDL that allocates a WLA to VDOT's MS4, (see note *7) the contractor shall investigate the area of concern at the site within 24 hours of discovery and ensure all erosion and sediment control best management practices are being implemented in accordance with the permits approved standards and specifications required by Part I.B of the current Construction General Permit. If corrective action is necessary, the contractor shall initiate corrective actions no later than 5 business days after the initial investigation.

17. If excessive loading of sediment from a land disturbing activity that is not the responsibility of the contractor is discovered discharging into a MS-4, the contractor shall notify the municipality with jurisdiction over erosion and sediment control activities.

* Denotes information that is to be provided/completed by the RLD.

** Denotes information that is to be provided/completed by the contractor.

Revised 5/1/19

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085	
DATE OF PLAN ISSUANCE:	TBD	
CONSULTANT PROJECT ID:	RK&K	
DESIGNED BY:	TIS	DATE: 05/27/22
DRAWN BY:	TIS	DATE: 05/27/22
CHECKED BY:	MJK	DATE: 05/27/22
APPROVED BY:		DATE:

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

STORMWATER POLLUTION PREVENTION PLAN

SHEET
1H(1)
SCALE N/A

STORMWATER POLLUTION PREVENTION PLAN

SECTION II EROSION AND SEDIMENT CONTROL

✱✱ 1. The intended sequence and timing of activities that disturb soils at the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.) shall be provided by the contractor in accordance with the current edition of Section 108.03 of the VDOT R&B Specifications and shall be included with the other SWPPP documents for this land disturbance (construction) activity.

2. Directions of stormwater flow and approximate slopes anticipated after major grading activities are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

3. Areas of soil disturbance and areas of the site which will not be disturbed are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

4. Locations of major structural and nonstructural ESC measures intended to filter, settle or similarly remove sediment are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

5. Locations where stabilization practices are expected to occur are identified in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. A description of interim and permanent stabilization practices for the site are identified in the applicable sections of the documents identified in the Note 1 of Section IV.

✱✱ 7. A record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated will be provided by the contractor and maintained with the record set of plans or other SWPPP documents for this land disturbance (construction) activity: (List how this will be tracked and the location)

8. A description and schedule of procedures to maintain vegetation, erosion and sediment control measures and other protective measures in good and effective operating conditions are identified in the current edition of Sections 107.16 and 303.03 of the VDOT R&B Specifications.

9. Nutrients shall be applied in accordance with the current edition of Sections 603 and 604 of the VDOT Road and Bridge Specifications. Nutrients shall not be applied during rainfall events. Top soil shall be applied in accordance with the current edition of section 602 of the latest Road and Bridge Specifications.

10. All engineering calculations supporting the design of erosion and sediment control measures proposed for this land disturbance (construction) activity are contained in ~~the project drainage file located in the (insert appropriate location, i.e., VDOT Central Office Hydraulics Section or the VDOT (specify) District Hydraulics Section or the VDOT (specify) Residency Office) and will be made available for review upon request during normal business hours.~~ this plan set.

11. The temporary erosion and siltation control items shown on the ESC Plan for this land disturbing (construction) activity are intended to provide a general plan for controlling erosion and sediment within the project limits. The ESC Plan is based on field conditions at the time of plan development and an assumed sequence of construction for the project. The contractor, in conjunction with the VDOT Project Engineer and/or ESC Inspector, shall adjust the location, quantity and type of erosion and sediment control items required based on the actual field conditions encountered at the time of construction and the actual scheduling and sequencing of the construction activities. Significant changes to the proposed ESC Plan (e.g., those that require an engineering analysis, elimination of a perimeter control, change to ESC concept that would affect the quantity or direction of flow of water) shall be submitted to the applicable District Hydraulics Engineer for review and approval. Any changes to the proposed ESC Plan must be noted on the designated record set of plans which shall be retained on the project site and made available upon request during normal business hours.

12. The areas beyond the project's construction limits are to be protected from siltation. Perimeter controls such as silt fence, diversion dikes, turbidity curtains, etc. shall be installed prior to any grubbing operations or other earth moving activities.

13. Temporary earthen structures such as dikes and berms are to be stabilized immediately upon installation. Stabilization may include temporary or permanent seeding, riprap, aggregate, sod, mulching, and/or soil stabilization blankets and matting in conjunction with seeding.

14. All channel relocations are to be constructed during the earliest stage of construction and shall be constructed in accordance with all applicable permit requirements and shall be constructed in the dry wherever possible. Stabilization or vegetation shall be established before flow is redirected through the constructed area as directed by the Engineer.

15. The contractor shall plan and implement his land disturbance operations in order to:
   a. Control the volume and velocity of stormwater runoff within the site to minimize erosion.
   b. Control the peak flow rates, volume and velocity of stormwater discharges to minimize erosion at outlets and in downstream channels.
   c. Minimize the amount of soil exposed.
   d. Minimize the disturbance of steep slopes.
   e. Minimize sediment discharge from the site.
   f. Provide and maintain natural buffers around surface waters, direct stormwater runoff to vegetated areas and maximize stormwater infiltration, unless infeasible.
   g. Minimize soil compaction (except in those areas where compaction is required by the contract documents) and preserve topsoil where feasible.

✱✱ 16. The name of the individual(s) or contractor(s) responsible for the installation and maintenance of the erosion and sediment control measures shall be supplied by the contractor and maintained with the other SWPPP documents for this land disturbance (construction) activity.

17. Soil stockpiles temporarily placed within the project area or on ~~VDOT~~ City of Manassas right of way or easement shall be identified, stabilized, and protected with sediment trapping measures.

18. A construction entrance or other approved measure shall be installed at all locations where construction vehicular traffic access routes intersect a paved or a public road in order to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or a public road surface, the road shall be cleaned thoroughly at the end of each work day by shoveling or sweeping. Removed sediment shall be disposed of in accordance with Section 106.04 of the R&B Specifications.

19. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP.

The following exceptions to the Water Quantity criteria of the VSMP Regulation have been approved by the DEQ for this land disturbance (construction) activity: (list all approved exceptions and include a brief description of the exception, the date approved and the approving DEQ Office)

Type(1)	Regulation Modified(2)	Approval Date(3)	Description of Variance

(1) Type of modification (Variance from ESC regulations, or Deviation from published guidance)
(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)
(3) Date that variance/exception/deviation was approved by DEQ.

SECTION III POST CONSTRUCTION STORMWATER MANAGEMENT

Choose the appropriate note 1A or 1B that is applicable to the proposed post construction SWM Plan for this land disturbance (construction) activity. (Delete, strikethrough or mark as NA those notes not applicable.)

1. (Include one of the following notes as appropriate)

~~✱ A. This land disturbance activity is grandfathered under Section 9VAC25-870-48 of the VSMP Regulations and utilizes the Part IIC technical criteria (i.e., Performance or Technology Based, MS-19, etc.) in Section 9VAC25-870-93 et seq. of the VSMP Regulations.~~

✱ B. This land disturbance activity utilizes the Part IIB technical criteria (i.e., Runoff Reduction Method, Energy Balance Equation, etc.) in Section 9VAC25-870-62 et seq. of the VSMP Regulations.

~~2. An exception for (number) pounds of phosphorus removal has been granted for this land disturbance activity by the DEQ in its letter dated (date).~~

3. Any variance, exception or deviation approved by DEQ must be listed below and supporting documentation (exception/variance/deviation request and DEQ approval) must be maintained with the SWPPP.

The following exceptions to the Water Quantity criteria of the VSMP Regulation have been approved by the DEQ for this land disturbance activity: (list all approved exceptions and include a brief description of the exception, the date approved and the approving DEQ Office)

Type(1)	Regulation Modified(2)	Approval Date(3)	Description of Waiver

(1) Type of modification (Variance, or Exception from SWM Regulations or Deviation from published guidance)
(2) Section of Regulation or Guidance Document Modified (e.g. ESC Min. Std. 15)
(3) Date that variance/exception/deviation was approved by DEQ.

4. The permanent onsite SWM facilities or offsite strategies proposed to meet the water quality/quantity requirements for this land disturbance (construction) activity are listed in Section VI.

5. A description of all post-construction stormwater management measures that will be installed during the construction process to control pollutants in stormwater discharges after construction operations have been completed is included in the construction plan set (or other such documents) for this land disturbance (construction) activity.

6. All engineering calculations supporting the design of the post-construction stormwater management measures for this land disturbance (construction) activity, including an explanation of the technical basis used to select the practices, are ~~contained in the project drainage file located in the (insert appropriate location, i.e., VDOT Central Office Hydraulics Section or the VDOT (specify) District Hydraulics Section or the VDOT (specify) Residency Office) and will be made available for review upon request during normal working business hours.~~ included in this plan set.

CBPA - Chesapeake Bay Preservation Act
BMP - Best Management Practice
DEQ - Department of Environmental Quality
EPA - U.S. Environmental Protection Agency
ESC - Erosion and Sediment Control
IIM - Instructional and Informational Memorandum
R&B - Road and Bridge
RLD - Responsible Land Disturber
SWPPP - Stormwater Pollution Prevention Plan
TMDL - Total Maximum Daily Load
VDOT - Virginia Department of Transportation
VPDES - Virginia Pollutant Discharge Elimination System
VSMP - Virginia Stormwater Management Program
VESCP - Virginia Erosion and Sediment Control Program
WLA - Waste Load Allocation
SWM - Stormwater Management

✱ Denotes information that is to be provided/ completed by the RLD.

✱✱ Denotes information that is to be provided/completed by the contractor.

Revised 5/1/19

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: TIS DATE: 05/27/22
DRAWN BY: TIS DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

STORMWATER POLLUTION PREVENTION PLAN

SHEET
1H(2)
SCALE N/A

STORMWATER POLLUTION PREVENTION PLAN

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2019 and ~~VDOT's~~ City of Manassas approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet outside the Chesapeake Bay Preservation Area, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The ~~VDOT~~ RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

SECTION IV SWPPP

1. All documents related to the SWPPP for this land disturbance (construction) activity shall be maintained at the activity site and shall be readily available for review upon request during normal business hours. Such documents include, but are not limited to, the construction plans (or other such documents), the ESC Plan, the Pollution Prevention Plan, the post construction SWM Plan (if applicable), the VDOT R&B Standards and Specifications, Supplemental Specifications, Special Provisions and Special Provision Copied Notes. Documents related to stormwater pollution prevention which are not a part of those documents referenced above, such as copies of the VPDES Construction Permit coverage letter (when applicable) and the VPDES General Permit For Discharges Of Stormwater From Construction Activities (when applicable) and those required to be developed by the contractor for pollution prevention associated with any on-site support facilities being included in the VPDES Construction Permit coverage for this land disturbance (construction) activity are to be maintained at the activity site with the other SWPPP documents for this land disturbance (construction) activity. Where no facilities are available at the activity site to maintain the SWPPP documents, they are to be kept by or with the designated RLD at a location convenient to the activity site where they would be made available for review upon request during normal business hours.

2. The SWPPP and any subsequent amendments, modifications and updates shall be implemented from commencement of land disturbance until termination of VPDES Construction Permit coverage or completion of land disturbance (construction) activities where no VPDES Construction Permit coverage is required.

** 3. For all on-site support facilities that will be included in the VPDES Construction Permit coverage for this land disturbance (construction) activity, the contractor shall develop a SWPPP in accordance with, but not limited to, Section 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications. The SWPPP for the on-site support facilities shall be maintained with and become a component of the SWPPP for this land disturbance (construction) activity. Support facilities shall include, but not be limited to, borrow and disposal areas, construction and waste material storage areas, equipment and vehicle washing, maintenance, storage and fueling areas, storage areas for fertilizers, fuels or chemicals, concrete wash out areas, sanitary waste facilities and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction site.

4. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the SWPPP shall be made available for review upon the request of the DEQ, the EPA, the VSMP Authority, the VESCP Authority, local government officials or the operator of a municipal separate storm sewer system (MS4) receiving discharge from the construction site.

* 5. For those land disturbing (construction) activities requiring coverage under the VPDES Construction Permit, the ~~VDOT~~ RLD shall post, or have posted, a copy of the General Permit coverage letter ~~and a copy of a completed LD-445A form~~, noting the name and contact information for the ~~VDOT~~ person responsible for the land disturbing (construction) activity and its SWPPP, outside the project's construction office along with other Federal and State mandated information. Where there is no construction office (e.g., a maintenance activity), the permit coverage letter ~~and the LD-445A form~~ are to be maintained with the other SWPPP documents for the land disturbing (construction) activity.

6. The SWPPP shall be made available for review by the public upon request. Such reviews shall be at a time and publicly accessible location convenient to the VDOT and shall be scheduled during normal business hours and no less than once per month.

SECTION V - POLLUTION PREVENTION PLAN

1. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are prohibited:
   a. Wastewater from concrete washouts.
   b. Wastewater from the washout and cleanout of stucco, paint, from release oils, curing compounds and other construction materials.
   c. Fuels, oils or other pollutants used in vehicle and equipment operation and maintenance.
   d. Oils, toxic substances or hazardous substances from spills or other releases.
   e. Soaps, solvents or detergents used in equipment and vehicle washing.
   f. There shall be no discharge of floating solids or visible foam in other than trace amounts

2. The following non-stormwater discharges from this land disturbing (construction) activity and any on-site support facilities are allowed when discharged in compliance with the VPDES Construction Permit:
   a. Discharges from firefighting activities.
   b. Fire hydrant flushings.
   c. Waters used to wash vehicles or equipment where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
   d. Water used to control dust that has been filtered, settled or similarly treated prior to discharge.
   e. Potable water sources including uncontaminated waterline flushings managed in a manner to avoid stream impacts.
   f. Routine external building wash down where soaps, solvents or detergents have not been used and the wash water has been filtered, settled or similarly treated prior to discharge.
   g. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (or where all spilled or leaked material has been removed prior to washing), where soaps, solvents or detergents have not been used and where the wash water has been filtered, settled or similarly treated prior to discharge.
   h. Uncontaminated air conditioning or compressor condensate.
   i. Uncontaminated ground water or spring water.
   j. Foundation or footing drains where flows are not contaminated with process materials such as solvents.
   k. Uncontaminated excavation dewatering, including dewatering trenches and excavations that have been filtered, settled or similarly treated prior to discharge.
   l. Landscape irrigation.

**
3. The contractor shall develop a Pollution Prevention Plan to address any of his on-site operations that have a potential to generate a pollutant that may reasonably be expected to affect the quality of stormwater discharges from this land disturbance (construction) activity. The Pollution Prevention Plan shall be developed in accordance with, but not limited to, Sections 106.08, 107.02 and 107.16 of the VDOT Road and Bridge Specifications and shall include a narrative with appropriate plan detail and shall be provided on standard 8.5 x 11 inch paper or larger and shall:
   a. Identify the potential pollutant-generating activities and the pollutant that is expected to be exposed to stormwater.
   b. Describe the location where the potential pollutant-generating activities will occur, or if identified on the record set of plans, reference the record set of plans.
   c. Identify all non-stormwater discharges, as described in note two of this section, that are or will be commingled with stormwater discharges from the construction activity, including any on-site support activities.
   d. Identify the person(s) or contractor(s) responsible for implementing and maintaining the pollution prevention practice or practices for each pollutant-generating activity.
   e. Describe the pollution prevention practices and procedures that will be implemented to:
      1) Prevent and respond to leaks, spills, and other releases, including procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases, and procedures for reporting leaks, spills, and other releases in accordance with Section 107.16 of the VDOT Road and Bridge Specifications and the requirements within the VPDES Construction Permit.
      2) Prevent the discharge of spilled and leaked fuels and chemicals from vehicle fueling and maintenance activities.
      3) Prevent the discharge of soaps, solvents, detergents, and wash water from construction materials, including procedures for the clean-up of stucco, paint, form release oils, and curing compounds.
      4) Minimize the discharge of pollutants from vehicle and equipment washing, wheel wash water, and other types of washing.
      5) Direct concrete wash water into a leak-proof container or leak-proof settling basin. The container or basin shall be designed so that no overflows can occur due to inadequate sizing or precipitation. Hardened concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wastes. Liquid concrete wastes shall be removed and disposed of in a manner consistent with the handling of other construction wash waters and shall not be discharged to surface waters.
      6) Minimize the discharge of pollutants from storage, handling, and disposal of construction products, materials, and wastes including building products (such as asphalt sealants, copper flashing, roofing materials, adhesives, and concrete admixtures), pesticides, herbicides, insecticides, fertilizers, landscape materials, construction and domestic wastes (such as packaging materials), scrap construction materials, masonry products, timber, pipe and electrical cuttings, plastics, styrofoam, concrete, and other trash or building materials.
      7) Prevent the discharge of fuels, oils, and other petroleum products, hazardous or toxic wastes, waste concrete and sanitary wastes.
      8) Address any other discharge from any potential pollutant-generating activity not listed herein.
      9) Minimize the exposure of waste materials to precipitation by closing or covering waste containers during precipitation events and at the end of the business day, or implementing other similarly effective practices. Minimization of exposure is not required in case where the exposure to precipitation will not result in a discharge of pollutants.
      10) Describe and implement procedures for providing pollution prevention awareness (including but not limited to prevention practices, disposal practices and appropriate disposal locations) for all applicable wastes (including any wash water), to appropriate personnel.

* Denotes information that is to be provided/completed by the RLD.

** Denotes information that is to be provided/completed by the contractor.

Revised 5/1/19

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: TIS DATE: 05/27/22
DRAWN BY: TIS DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

STORMWATER POLLUTION PREVENTION PLAN

SHEET
1H(3)
SCALE N/A

STORMWATER POLLUTION PREVENTION PLAN

The information contained in the SWPPP General Information sheets is intended to comply with the requirements of the VPDES General Permit For Discharges Of Stormwater From Construction Activities (the VPDES Construction Permit) issued July 1, 2019 and ~~VDOT's~~ City of Manassas approved Annual ESC and SWM Standards and Specifications.

The SWPPP General Information sheets are to be completed and included in the construction plan set (or other such documents) for land disturbance (construction) activities that disturb an area equal to or greater than 10,000 square feet, or equal to or greater than 2,500 square feet in the area defined as Tidewater, Virginia in the Virginia Chesapeake Bay Preservation Act.

The ~~VDOT~~ RLD will ensure that the information shown on the SWPPP General Information sheets is updated/revised as necessary in order to reflect changes that may occur during the construction phase of the land disturbing (construction) activity. The updated/revised sheets shall be maintained with the designated record set of plans (or other such documents) for the land disturbance (construction) activity.

SECTION VI - PERMANENT BMP INFORMATION △

✱ Denotes information that is to be completed by the RLD.
( ) See note referenced by number in parentheses.

INSTALLED BMP INFORMATION
(VDOT Owned/Operated)

Plan Sheet(s)	Date BMP Made Functional	Type of BMP Installed (See Table A and C)	Geographic Location (County or City)	Latitude/Longitude (1) LAT	Latitude/Longitude (1) LONG	VA 6th Order HUC (7)	Receiving Water (2)	Name of Impaired Water (9)	Acres Treated Per BMP (3) Impervious	Acres Treated Per BMP (3) Pervious	Acres Treated Per BMP (3) TOTAL	✱ BMP Maintenance ID Number (10)	BMP Maintenance Manual (11) SECTION	BMP Inspection Manual (11) SECTION

ALTERNATIVE BMP INFORMATION

Plan Sheet(s)	Date	Type of BMP Installed (See Table B)	Geographic Location (County or City) (5)	Latitude/Longitude (1) (5) LAT	Latitude/Longitude (1) (5) LONG	VA 6th Order HUC (5) (7)	Receiving Water (2)	Name of Impaired Water (9)

Perpetual Nutrient Credits Acquired for Project

Name of Nutrient Credit Generating Entity (6)	Nutrient Credits (lbs./TP./year) Acquired (6) (12)
TBD	0.50

△ Any changes to the proposed SWM Plan or BMPs necessitated during the construction phase of the project that affects the proposed construction details or potentially affects the informationshown in the BMP Tables A and/or B shall be coordinated by the VDOT RLD with the appropriate VDOT District Hydraulics Engineer. The construction plans and the BMP Tables A and/or B are to be formally revised to reflect any authorized/approved changes to the proposed SWM Plan and/or the proposed BMP construction details. All plan revisions shall be completed in accordance with the Road Design Manual and the Construction Division IIM-CD-2013-12.01, signed and sealed in accordance with Department's sealing and signing policy IIM-LD-243 and filed with the construction record drawings maintained in the VDOT Central Office Plan File Room (ProjectWise). Prior to submitting for termination of coverage under the VPDES General Permit For The Discharge Of Stormwater From Construction Activities, the RLD shall have the District Maintenance Division review the BMPs installed with the project (BMP Table A) for acceptance of maintenance responsibility and to obtain a Maintenance ID number for each BMP listed in BMP Table A. The RLD shall use the informationin BMP Tables A and B along with the assigned Maintenance ID number and the date that the BMP became functional as a permanent control measure (for BMPs in Table A only) to complete the LD-445D form when certifying the construction of the BMPs and submitting for termination of coverage under theVPDES General Permit For The Discharge Of Stormwater From Construction Activities.

Table A: Permanent BMP Types (1999 Va. SWM Handbook)
Bio-retention Basin
Bio-retention Filter
Constructed Stormwater Wetlands
Extended Detention Basin
Extended Detention Basin Enhanced
Grassed Swale
Infiltration Basin
Infiltration Trench
Manufactured Treatment Device (MTD) (8)
Retention Basin I
Retention Basin II
Retention Basin III
Sand Filter
Vegetated Filter Strip
Other Approved Types (List Type)
Detention Basin

Table B: Alternative BMP Types
Comprehensive SWM Plan (Regional) Facility
Pollutant Loading Pro Rata Share Program
Other Approved Options (List Type) (4)

Table C: Permanent BMP Types (BMP Clearing House)
Sheet Flow to Vegetated Filter Strip
Grass Channel
Soil Compost Amendment
Permeable Pavement (Level 1)
Permeable Pavement (Level 2)
Infiltration Practice (Level 1)
Infiltration Practice (Level 2)
Bioretention (Level 1)
Bioretention (Level 2)
Dry Swale (Level 1)
Dry Swale (Level 2)
Wet Swale (Level 1)
Wet Swale (Level 2)
Filtering Practice (Level 1)
Filtering Practice (Level 2)
Constructed Wetlands (Level 1)
Constructed Wetlands (Level 2)
Extended Detention Pond (Level 1)
Extended Detention Pond (Level 2)
Wet Pond (Level 1)
Wet Pond (Level 2)
Manufactured Treatment Device (MTD)(8)
Other Approved Types (List Type)

NOTES:
(1) In decimal degrees to the nearest one ten-thousandth of a degree.

(2) For streams with no names, list "(Unnamed Tributary to downstream name)".

(3) Show acres treated to the nearest one hundreths acre.

(4) Include agreements with off-site BMP owners.

(5) Information pertains to the alternative BMP option location, where applicable. Exception - Not required for nutrient credit purchase option.

(6) Applies to the purchase of nutrient credits only.

(7) Virginia 6th Order HUC (VAHU6) Example - YO30.

(8) Final approved shop drawings of Manufactured Treatment Devices (MTDs) are to be included with the BMP information submitted with the LD-445D form.

(9) List the name of any impaired water to which the BMP discharges. The determination of impaired water shall be based on those streams listed as impaired in the DEQ 2012 305(b)/303(d) Water Quality Assessment Integrated Report and shall be the first named waterbody to which the BMP discharges. The impaired waters are those impaired by sediment, total suspended solids, turbidity, nitrogen or phosphorus.

(10) BMP Maintenance ID Number is to be assigned by the District Maintenance Division at permit termination or project completion. This ID number shall be assigned prior to the permit close out process and entered by the area construction engineer under this column, per IIM-LD-95

ACRONYMS

(11) Provide the section of each Maintenance manual that pertains to the type of BMP. Both manuals can be found at www.vdot.virginia.gov/business/manuals in the Maintenance selections. Example: Section 4 would be noted for both the maintenance and inspection manuals for a Bioretention I infiltration BMP.

(12) Nutrient credits purchased to the nearest one hundredth pound.

Revised 5/1/19

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: TIS DATE: 05/27/22
DRAWN BY: TIS DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

STORMWATER POLLUTION PREVENTION PLAN

SHEET
1H(4)
SCALE N/A

EXISTING CONDITIONS

(A) CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 14+25.00
CENTREVILLE ROAD NORTH CONSTR. ℄
STA. 30+00.00
PRESCOTT AVENUE CONSTR. ℄
STA. 53+50.00
SUDLEY ROAD CONSTR. ℄
STA. 73+50.00

(B) ROUNDABOUT CONSTR. ℄
STA. 91+81.92
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 13+78.00 =
DELTA = 90° 00' 00" LT.

(C) ROUNDABOUT CONSTR. ℄
STA. 92+29.23
PRESCOTT AVENUE CONSTR. ℄
STA. 53+03.00 =
DELTA = 90° 00' 00" LT.

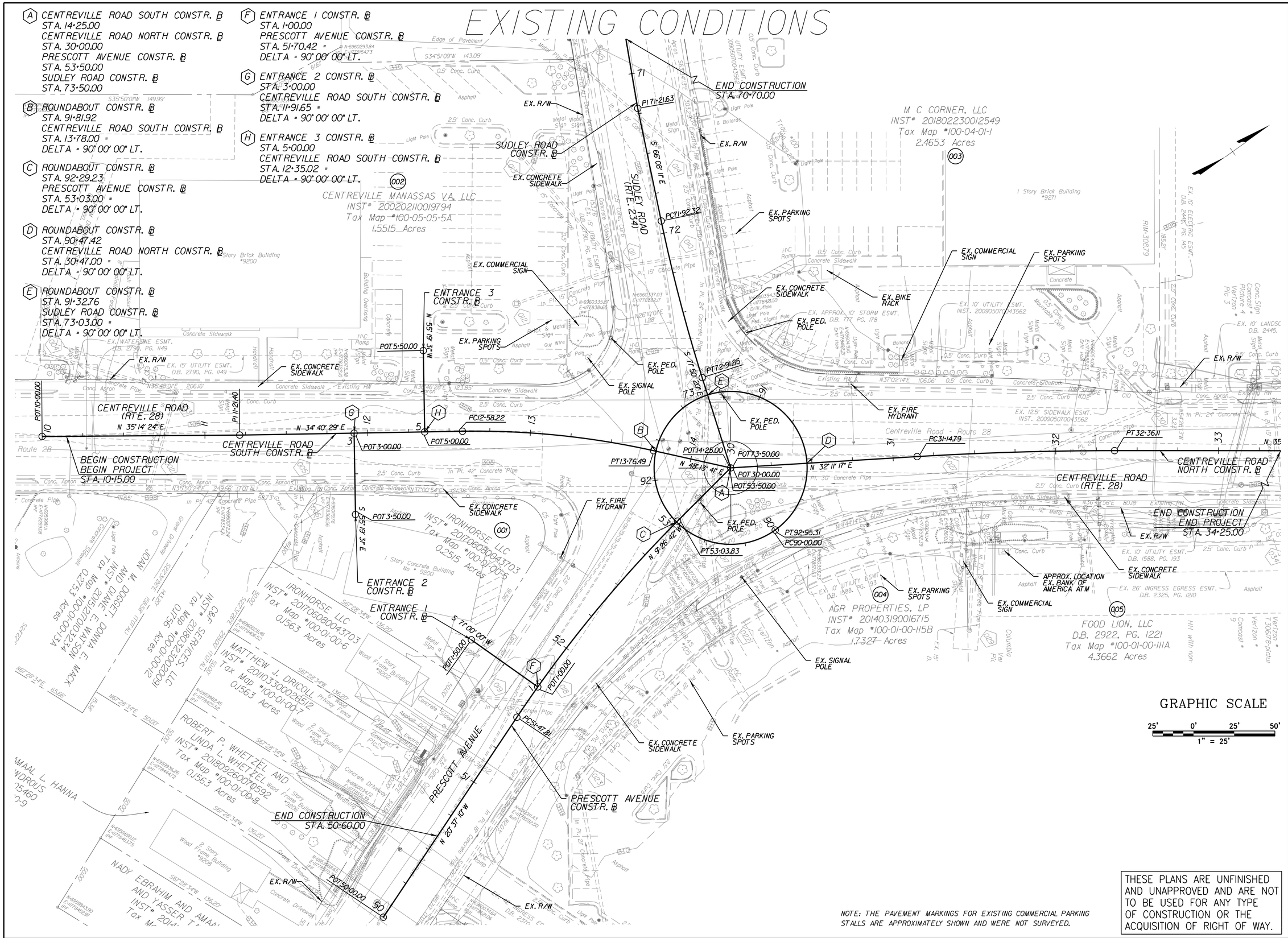
(D) ROUNDABOUT CONSTR. ℄
STA. 90+47.42
CENTREVILLE ROAD NORTH CONSTR. ℄
STA. 30+47.00 =
DELTA = 90° 00' 00" LT.

(E) ROUNDABOUT CONSTR. ℄
STA. 91+32.76
SUDLEY ROAD CONSTR. ℄
STA. 73+03.00 =
DELTA = 90° 00' 00" LT.

(F) ENTRANCE 1 CONSTR. ℄
STA. 1+00.00
PRESCOTT AVENUE CONSTR. ℄
STA. 51+70.42 =
DELTA = 90° 00' 00" LT.

(G) ENTRANCE 2 CONSTR. ℄
STA. 3+00.00
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 11+91.65 =
DELTA = 90° 00' 00" LT.

(H) ENTRANCE 3 CONSTR. ℄
STA. 5+00.00
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 12+35.02 =
DELTA = 90° 00' 00" LT.



NOTE: THE PAVEMENT MARKINGS FOR EXISTING COMMERCIAL PARKING STALLS ARE APPROXIMATELY SHOWN AND WERE NOT SURVEYED.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

EXISTING CONDITIONS

SHEET
1J
SCALE 1"=25'

GENERAL NOTES

CITY OF MANASSAS GENERAL NOTES

ALL CONSTRUCTION WITHIN EXISTING AND/ OR PROPOSED R/W IS TO CONFORM TO THE VDOT STANDARDS AND SPECIFICATIONS, THE CURRENT EDITION OF THE CITY OF MANASSAS DESIGN AND CONSTRUCTION STANDARDS MANUAL (DSCM), LATEST EDITION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE VIRGINIA WORK AREA PROTECTION MANUAL (VWAPM), UNLESS OTHERWISE NOTED.

METHODS AND MATERIALS USED IN THE CONSTRUCTION OF THE IMPROVEMENTS HEREIN SHALL CONFORM TO THE CURRENT EDITION OF THE CITY OF MANASSAS DESIGN AND CONSTRUCTION STANDARDS MANUAL (DCSM) AND VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS INCURRED FOR THE RELOCATION OF OR DAMAGE TO ANY PUBLIC UTILITIES DUE TO CONSTRUCTION.

MEASURES TO CONTROL EROSION AND SILTATION MUST BE PROVIDED AND INSTALLED ACCORDING TO ARTICLE 4 OF THE CITY OF MANASSAS DCSM AND/OR THE CURRENT EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. THE APPROVAL OF THESE PLANS IN NO WAY RELIEVES THE CONTRACTOR OR AGENT OF THE RESPONSIBILITIES CONTAINED IN THE SILTATION AND EROSION CONTROL POLICY.

THE CONTRACTOR IS REQUIRED TO SCHEDULE A PRECONSTRUCTION MEETING WITH THE DEVELOPMENT SERVICES SITE INSPECTION DIVISION PRIOR TO ANY LAND DISTURBING ACTIVITIES (703-257-8278).

BEFORE BURNING, BLASTING, TRANSPORTATION OR STORAGE OF EXPLOSIVES IN THE CITY OF MANASSAS A PERMIT SHALL BE OBTAINED FROM THE FIRE MARSHAL'S OFFICE.

PRIOR TO ANY LAND DISTURBING ACTIVITIES, ALL NECESSARY PERMITS SHALL BE OBTAINED (703-257-8278).

A PERMIT WILL BE REQUIRED FOR ALL ADVERTISING SIGNS. THIS PERMIT CAN BE SECURED FROM THE CITY OF MANASSAS DEVELOPMENT SERVICES.

ALL UNSTABLE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION LIMITS OF THE ROADWAY BEFORE PLACING EMBANKMENT.

ALL STREETS SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF MAXIMUM DENSITY DETERMINED IN CONFORMITY WITH VTM-1 METHOD. THE SUBDIVIDER SHALL USE MECHANICAL MEANS TO ACHIEVE THE REQUIRED COMPACTION.

THE CONTRACTOR SHALL PROVIDE TO THE CITY OF MANASSAS, THIRD PARTY GEOTECHNICAL TESTING RESULTS.

ALL STORM SEWER SYSTEMS SHALL BE REINFORCED CONCRETE PIPE. ALL CONCRETE PIPE TO BE PLACED WITHIN THE DEDICATED RIGHT-OF-WAY- SHALL CONFORM TO ASTM SPECIFICATION C76-65T CLASS IV.

ALL CITY OF MANASSAS STANDARD PAVEMENT DESIGNS ARE BASED ON A MINIMUM CBR VALUE OF 10.

A SMOOTH GRADE SHALL BE MAINTAINED FROM CENTERLINE OF EXISTING ROAD TO PROPOSED CURB AND GUTTER TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/ OR THE PONDING OF ANY WATER ON THE ROADWAY.

THE CONTRACTOR SHALL GRADE SLOPES NO STEEPER THAN 3:1 ON RETURNS AT INTERSECTIONS TO PROVIDE ADEQUATE SIGHT DISTANCE.

ALL UNDERGROUND UTILITIES MUST BE PLACED FROM THE UTILITY MAIN TO THE RIGHT-OF-WAY LINE FOR EACH LOT AND ALL UNDERGROUND UTILITY MAINS AND CONNECTIONS MUST BE INSTALLED AND TESTED IN-PLACE PRIOR TO THE APPLICATION OF ANY BITUMINOUS MATERIALS OR BASE STONE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING ANY CONSTRUCTION. CALL BEFORE YOU DIG 1-800-552-7001.

IT IS THE INTENTION OF THESE PLANS THAT ALL AREAS SHALL BE GRADED IN DETAIL SO AS TO PROVIDE POSITIVE SURFACE DRAINAGE AND TO PREVENT THE PONDING OF WATER.

THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF CLEANING TRUCKS AND/ OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, ALLAY DUST, AND TO TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT THE ROAD IS MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITIONS AT ALL TIMES. NO SEPARATE PAY ITEM WILL BE PROVIDED FOR THIS WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING ALL UTILITY COMPANIES (GAS, ELECTRIC, TELEPHONE, ETC.) WITH COPIES OF PLANS THAT HAVE BEEN APPROVED BY THE CITY OF MANASSAS AND ADVISING THEM THAT ALL GRADING SHALL CONFORM TO THE APPROVED PLANS AND FURTHER THAT THE UTILITY COMPANIES SHALL BE RESPONSIBLE FOR HONORING THESE PLANS AND THE FINISH GRADES IN THE INSTALLATION OF THEIR UTILITY LINES.

ALL UTILITY TIE IN WORK SHALL BE COORDINATED WITH THE CITY INSPECTOR.

DRAINAGE

D-1 The horizontal location of all drainage structures shown on these plans is approximate only, with the exception of structures showing specific stations, special design bridges and storm sewer systems.

D-2 The horizontal location and invert elevations shown for proposed culverts and storm sewer outfall pipes are based on existing survey data and required design criteria. If during construction, it is found that the horizontal location or invert elevations shown on the plans differ significantly from the horizontal location or elevations of the stream or swale in which the culvert or storm sewer outfall pipe is to be placed, the Engineer shall confer with, and get approval from, the applicable District Drainage Engineer before installing the culvert or storm sewer outfall pipe.

D-3 The "H" dimensions shown on plans for drop inlets and junction boxes and the "L.F." dimensions shown for manholes are for estimating purposes and are based on the proposed invert elevations shown for the structure and the anticipated top (rim) elevation based on existing or proposed finished grade. The actual "H" or "L.F." dimensions are to be determined by the contractor from field conditions.

D-7 All pipe on this project shall be class IV concrete. For strength, sheet thickness, or class designation; available sizes; height of cover limitations; and other restrictions for a particular pipe type or height cover, see the applicable sections of the VDOT Road and Bridge Standards PC-1.

D-12 All existing drainage facilities labeled "To Be Abandoned" shall be left in place, backfilled and plugged in accordance with the VDOT Road and Bridge Standard PP-1. Basis of Payment will be C.Y. of Flowable Backfill.

D-13 Existing drainage facilities being utilized as a part of the drainage system, and designated on the plans "To Be Cleaned Out" shall be cleaned as directed by the Engineer. The cost incidental to this shall be included in the contract price for other items.

D-14 Proposed drop inlets with a height (H) less than the standard minimum shown in the VDOT Road and Bridge Standards shall be considered and paid for as Standard Drop Inlets for the type specified. Pipes with less than standard minimum finished height of cover shall be noted as such in the drainage description for the pipe. Specific pipe bedding and cover requirements are provided in the applicable PB-1 and PC-1 standard drawings of the VDOT Road and Bridge Standards.

D-17 St'd. SL-1 Safety Slab locations are based on the assumed use of precast structures. If cast-in-place structures are utilized, and the interior chamber dimensions (length and width, or diameter) are less than 4 feet, the safety slabs shall not be installed.

EROSION AND SEDIMENT CONTROL (ESC)

E-1 If the removal of Brush Silt Barrier is specified by the plans or required by the Engineer, the cost of removal and disposal of brush shall be in accordance with Section 109 of the applicable VDOT Road and Bridge Specifications.

E-2 Rock for Check Dams, Inlet Protection, Erosion Control Stone and Riprap shall be in accordance with Section 203 and Section 414 of the applicable VDOT Road and Bridge Specifications.

E-3 The following symbols are used to depict Erosion Control items in the plan assembly:

- (IP-B) DENOTES INLET PROTECTION,TYPE B:VDOT ST'D.EC-6
- (IP-A) DENOTES INLET PROTECTION,TYPE A:VDOT ST'D.EC-6
- (TSF) DENOTES TEMPORARY SILT FENCE,VDOT ST'D.EC-5
- (TR) DENOTES AN EXISTING TREE TO BE REMOVED
- (TP) DENOTES TREES TO HAVE PROTECTION BARRICADE
- DENOTES LIMITS OF DISTURBANCE

GRADING

G-1 The grade line denotes top of finished pavement unless shown otherwise on typical sections or plans.

G-2 Earthwork quantities on this project are based on anticipated settlement and may require adjusting during construction.

G-4 The cost of removal of all existing concrete items located in the area to be graded, including, but not limited to the following, shall be included in the price bid for regular excavation: Concrete Pipe

G-6 The borrow material for this project shall be a minimum CBR 10 or as approved by the Materials Engineer.

INCIDENTALS

I-6 Certain trees shall be preserved as noted on plans or as directed by the Engineer.

I-16 The "underground utilities" survey data on this project has been provided by consultant and copies are available from the Department.

I-18 All pavement markings and traffic flow arrows shown on the roadway construction plans are schematic only. The actual location and application of pavement markings shall be in accordance with Section 704 of the applicable VDOT Road and Bridge Specifications and MUTCD.

PAVEMENT

P-2 The pavement materials on this project will be paid for on a tonnage basis. The weight will vary in accordance with the specific gravity of the aggregates and the asphaltic content of the mix actually used to secure the design depth. The weight of the asphalt concrete is based on 95% of the theoretical maximum density.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

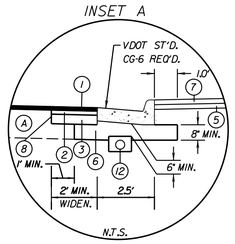
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

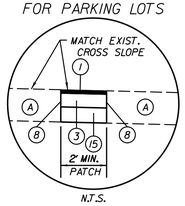
GENERAL NOTES

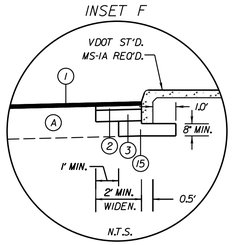
SHEET 2

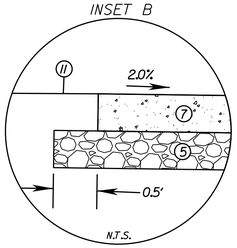
SCALE N/A

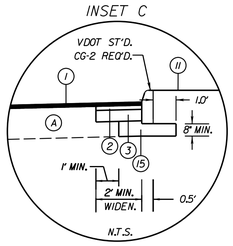
TYPICAL SECTIONS

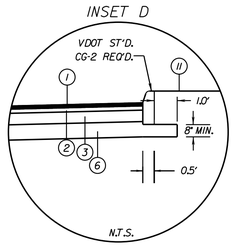


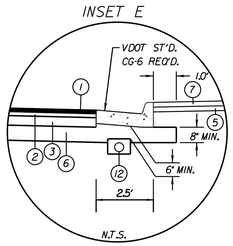


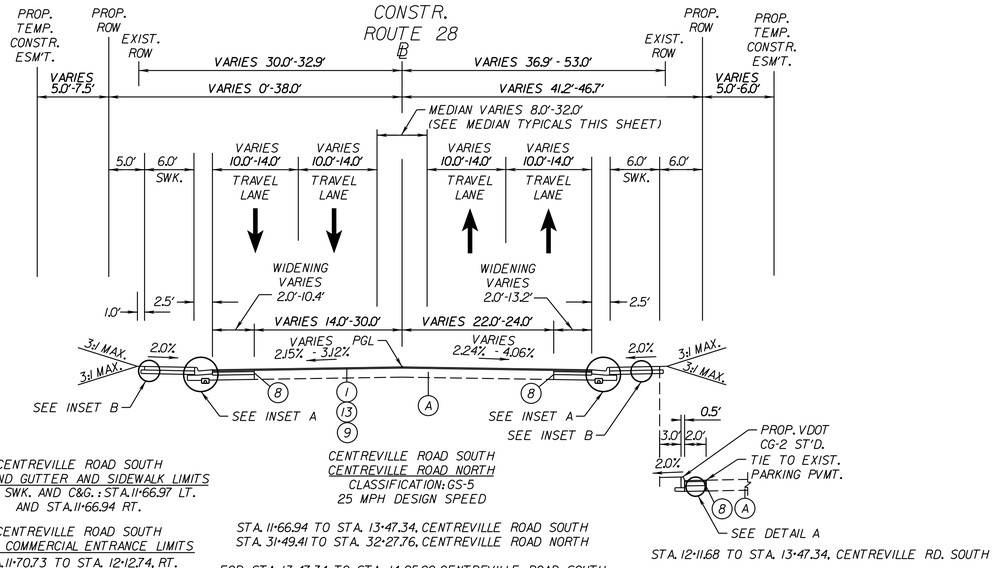












CENTREVILLE ROAD SOUTH
CURB AND GUTTER AND SIDEWALK LIMITS
BEGIN SWK. AND C&G.: STA.11+66.97 LT. AND STA.11+66.94 RT.

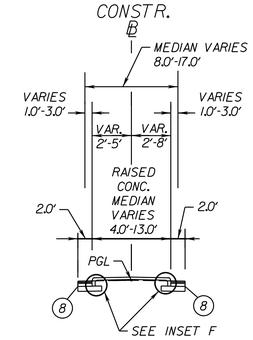
CENTREVILLE ROAD SOUTH
CG-9D COMMERCIAL ENTRANCE LIMITS
STA.11+70.73 TO STA. 12+12.74, RT.
STA.12+13.92 TO STA. 12+56.94, LT.

CENTREVILLE ROAD SOUTH
CENTREVILLE ROAD NORTH
CLASSIFICATION: GS-5
25 MPH DESIGN SPEED

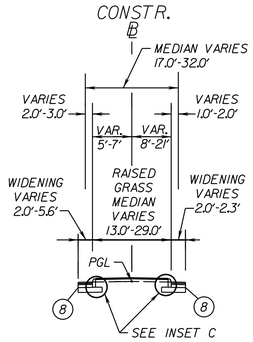
STA. 11+66.94 TO STA. 13+47.34, CENTREVILLE ROAD SOUTH
STA. 31+49.41 TO STA. 32+27.76, CENTREVILLE ROAD NORTH

FOR STA. 13+47.34 TO STA. 14+25.00, CENTREVILLE ROAD SOUTH
*SEE ROUNDABOUT DETAILS

STA. 12+11.68 TO STA. 13+47.34, CENTREVILLE RD. SOUTH

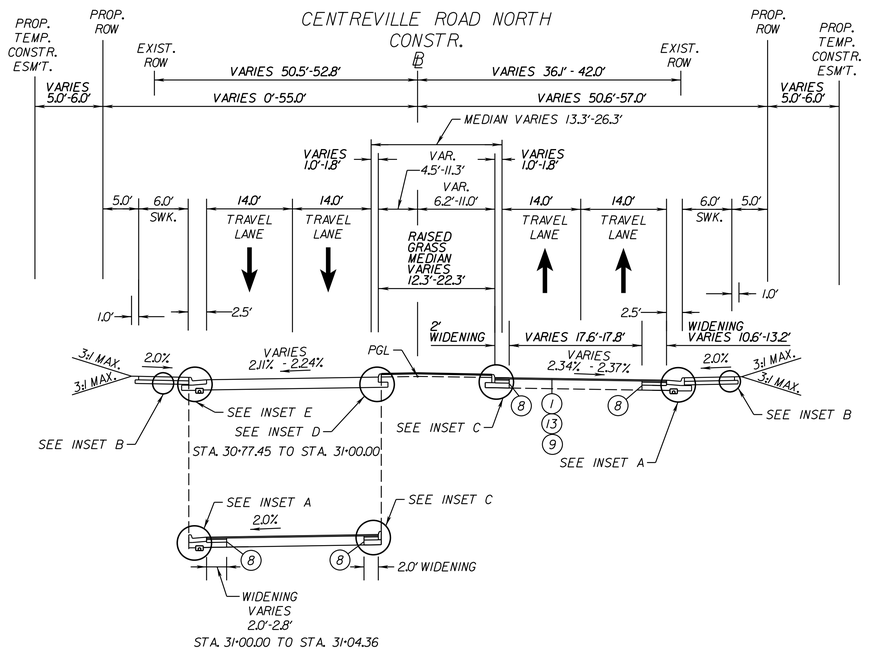


STA. 13+02.38 TO STA. 13+32.66, CENTREVILLE RD. SOUTH
STA. 31+04.36 TO STA. 31+49.41, CENTREVILLE ROAD NORTH



STA. 13+32.66 TO STA. 13+47.34, CENTREVILLE RD. SOUTH

MEDIAN TYPICALS

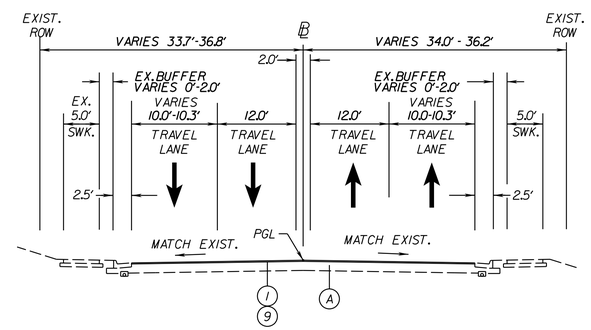


STA. 31+00.00 TO STA. 31+04.36

CENTREVILLE ROAD NORTH
CLASSIFICATION: GS-5
25 MPH DESIGN SPEED

STA. 30+77.45 TO STA. 31+04.36

FOR STA. 30+00.00 TO STA. 30+77.45
*SEE ROUNDABOUT DETAILS



MILLING AND RESURFACING

STA. 10+15.00 TO STA. 11+66.94, CENTREVILLE ROAD SOUTH
STA. 32+27.76 TO STA. 34+25.00, CENTREVILLE ROAD NORTH
STA. 70+70.00 TO STA. 71+25.34, SUDLEY ROAD

CENTREVILLE ROAD NORTH
CURB AND GUTTER AND SIDEWALK LIMITS
BEGIN SWK. AND C&G.: STA.32+41.40 LT. AND STA.31+30.74 RT.

LEGEND

(A) EXISTING PAVEMENT (TO REMAIN)
(1) 2" ASPHALT CONCRETE TYPE SM-9.5D
(2) 2" ASPHALT CONCRETE TYPE IM-19.0A
(3) 5" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
(4) STAMPED CEMENT CONCRETE PAVEMENT
(5) 4" AGGREGATE BASE MATERIAL, TYPE I, SIZE NO.21A OR 21B
(6) VARIABLE DEPTH AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21B. THICKNESS OF AGGREGATE BASE MATERIAL SHALL BE 8" MIN OR EXTEND TO THE BOTTOM OF THE EXISTING AGGREGATE BASE LAYER (WHICHEVER IS GREATER). AGGREGATE BASE MATERIAL SHALL NOT BE LESS THAN 6" THICK ABOVE UD-4 UNDERDRAIN AND BENEATH CURB AND GUTTER
(7) 4" HYDRAULIC CONCRETE SIDEWALK
(8) SAWCUT ASPHALT CONCRETE PAVEMENT (FULL DEPTH)
(9) 2" MILL & OVERLAY
(10) CONCRETE CLASS A3 HYDRAULIC CEMENT PAVEMENT (8" REINFORCED PER VDOT ST'D. PR-2)
(11) 2" TOPSOIL CLASS A AND SEEDING REQ'D.
(12) VDOT ST'D. UNDERDRAIN UD-4 REQ'D.
(13) VARIABLE DEPTH ASPHALT CONCRETE TYPE SM-9.5D (WEDGE AND LEVEL) 2" MIN. DEPTH
(14) VDOT ST'D. MS-1A REQ'D.
(15) 8" CEMENT TREATED AGGREGATE

NOTE: ALL PAVEMENT WIDENING SHALL BE DONE IN ACCORDANCE WITH VDOT ST'D. WP-2.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

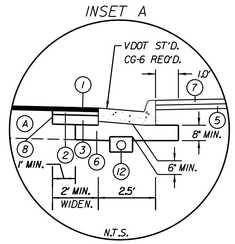
MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

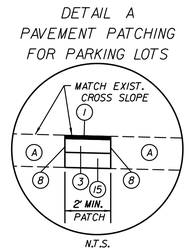
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

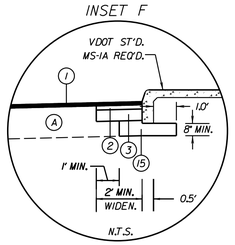
TYPICAL SECTIONS

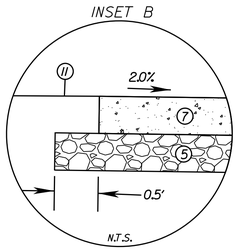
SHEET
2A(1)
SCALE NTS

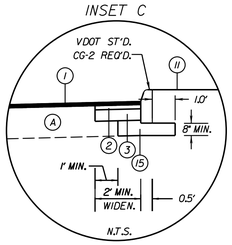
TYPICAL SECTIONS

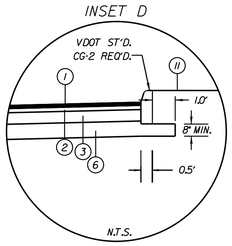


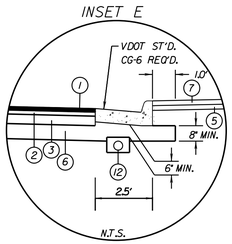


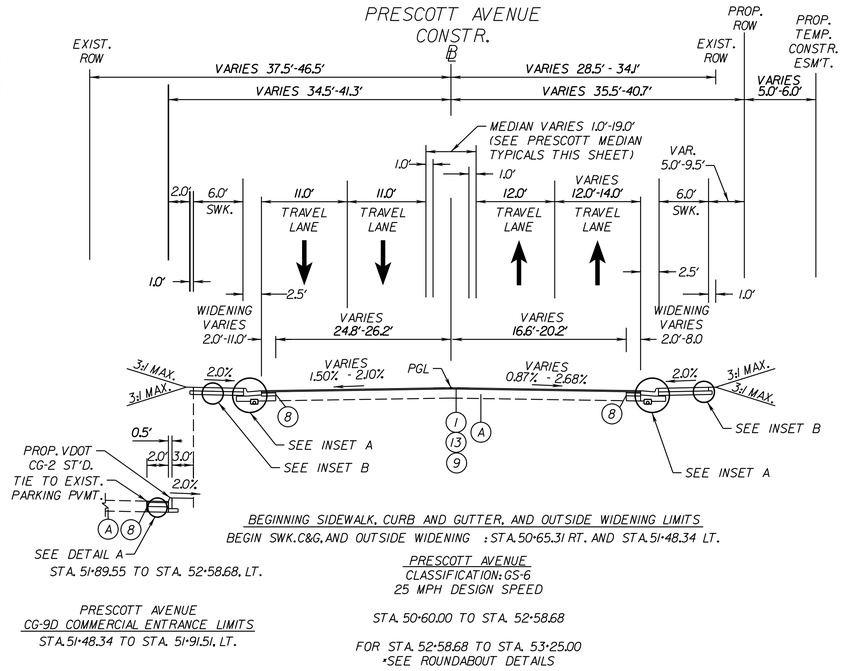












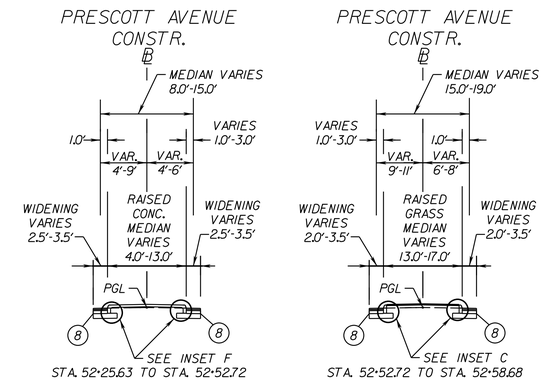
BEGINNING SIDEWALK, CURB AND GUTTER, AND OUTSIDE WIDENING LIMITS
BEGIN SWK.C&G.AND OUTSIDE WIDENING : STA.50+65.31 RT. AND STA.51+48.34 LT.

PRESCOTT AVENUE
CLASSIFICATION: GS-6
25 MPH DESIGN SPEED

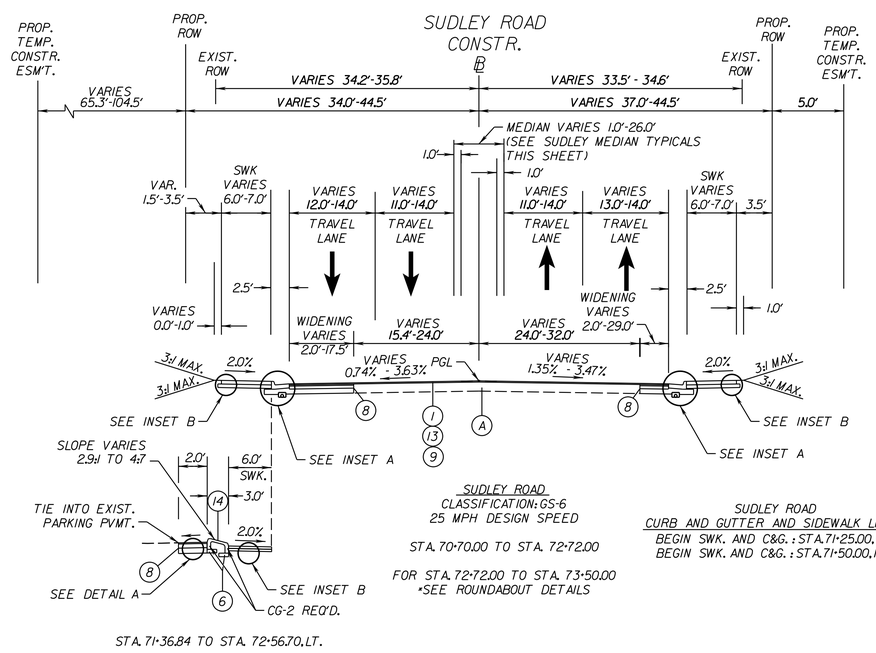
STA. 50+60.00 TO STA. 52+58.68

FOR STA. 52+58.68 TO STA. 53+25.00
*SEE ROUNDABOUT DETAILS

PRESCOTT AVENUE
CG-9D COMMERCIAL ENTRANCE LIMITS
STA.51+48.34 TO STA. 51+91.51, LT.



PRESCOTT MEDIAN TYPICALS

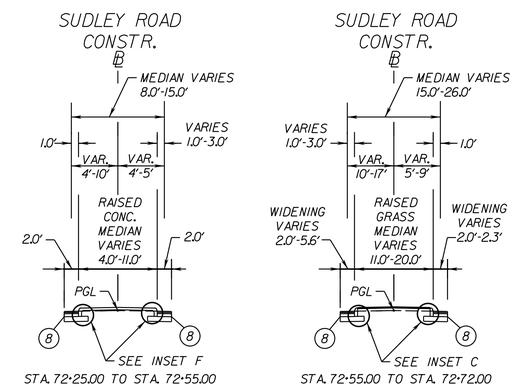


SUDLEY ROAD
CLASSIFICATION: GS-6
25 MPH DESIGN SPEED

STA. 70+70.00 TO STA. 72+72.00

FOR STA. 72+72.00 TO STA. 73+50.00
*SEE ROUNDABOUT DETAILS

SUDLEY ROAD
CURB AND GUTTER AND SIDEWALK LIMITS
BEGIN SWK. AND C&G. : STA.71+25.00, LT.
BEGIN SWK. AND C&G. : STA.71+50.00, RT.



SUDLEY MEDIAN TYPICALS

LEGEND

(A) EXISTING PAVEMENT (TO REMAIN)
(1) 2" ASPHALT CONCRETE TYPE SM-9.5D
(2) 2" ASPHALT CONCRETE TYPE IM-19.0A
(3) 5" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
(4) STAMPED CEMENT CONCRETE PAVEMENT
(5) 4" AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21A OR 21B
(6) VARIABLE DEPTH AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21B. THICKNESS OF AGGREGATE BASE MATERIAL SHALL BE 8" MIN OR EXTEND TO THE BOTTOM OF THE EXISTING AGGREGATE BASE LAYER (WHICHEVER IS GREATER). AGGREGATE BASE MATERIAL SHALL NOT BE LESS THAN 6" THICK ABOVE UD-4 UNDERDRAIN AND BENEATH CURB AND GUTTER
(7) 4" HYDRAULIC CONCRETE SIDEWALK
(8) SAWCUT ASPHALT CONCRETE PAVEMENT (FULL DEPTH)
(9) 2" MILL & OVERLAY
(10) CONCRETE CLASS A3 HYDRAULIC CEMENT PAVEMENT (8" REINFORCED PER VDOT ST'D. PR-2)
(11) 2" TOPSOIL CLASS A AND SEEDING REQ'D.
(12) VDOT ST'D. UNDERDRAIN UD-4 REQ'D.
(13) VARIABLE DEPTH ASPHALT CONCRETE TYPE SM-9.5D (WEDGE AND LEVEL) 2" MIN. DEPTH
(14) VDOT ST'D. MS-1A REQ'D.
(15) 8" CEMENT TREATED AGGREGATE

NOTE: ALL PAVEMENT WIDENING SHALL BE DONE IN ACCORDANCE WITH VDOT ST'D. WP-2.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

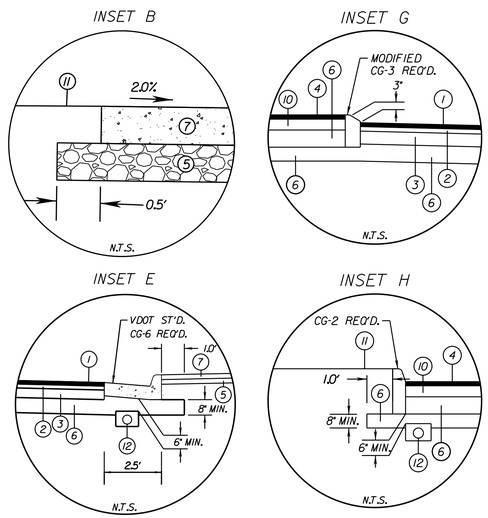
MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL DATE:	05/27/22
DRAWN BY: DVL DATE:	05/27/22
CHECKED BY: MJK DATE:	05/27/22
APPROVED BY: ____ DATE:	

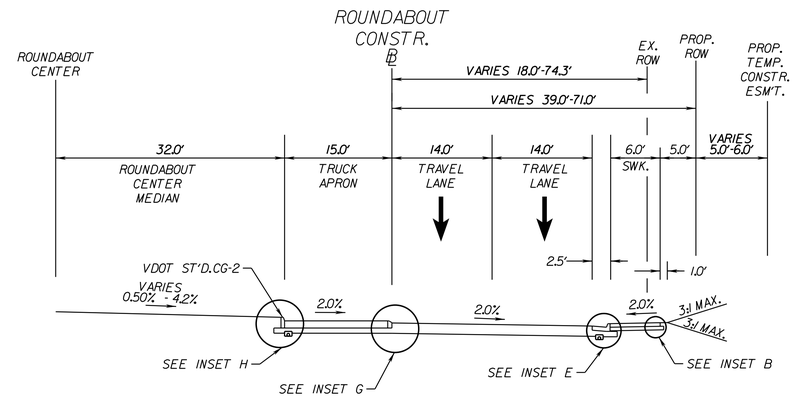
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

TYPICAL SECTIONS

SHEET
2A(2)
SCALE NTS

TYPICAL SECTIONS





LEGEND

(A) EXISTING PAVEMENT (TO REMAIN)
(1) 2" ASPHALT CONCRETE TYPE SM-9.5D
(2) 2" ASPHALT CONCRETE TYPE IM-19.0A
(3) 5" ASPHALT CONCRETE BASE COURSE TYPE BM-25.0A
(4) STAMPED CEMENT CONCRETE PAVEMENT
(5) 4" AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21A OR 21B
(6) VARIABLE DEPTH AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21B. THICKNESS OF AGGREGATE BASE MATERIAL SHALL BE 8" MIN OR EXTEND TO THE BOTTOM OF THE EXISTING AGGREGATE BASE LAYER (WHICHEVER IS GREATER). AGGREGATE BASE MATERIAL SHALL NOT BE LESS THAN 6" THICK ABOVE UD-4 UNDERDRAIN AND BENEATH CURB AND GUTTER
(7) 4" HYDRAULIC CONCRETE SIDEWALK
(8) SAWCUT ASPHALT CONCRETE PAVEMENT (FULL DEPTH)
(9) 2" MILL & OVERLAY
(10) CONCRETE CLASS A3 HYDRAULIC CEMENT PAVEMENT (8" REINFORCED PER VDOT ST'D. PR-2)
(11) 2" TOPSOIL CLASS A AND SEEDING REQ'D.
(12) VDOT ST'D. UNDERDRAIN UD-4 REQ'D.
(13) VARIABLE DEPTH ASPHALT CONCRETE TYPE SM-9.5D (WEDGE AND LEVEL) 2" MIN. DEPTH
(14) VDOT ST'D. MS-1A REQ'D.
(15) 8" CEMENT TREATED AGGREGATE

NOTE: ALL PAVEMENT WIDENING SHALL BE DONE IN ACCORDANCE WITH VDOT ST'D. WP-2.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

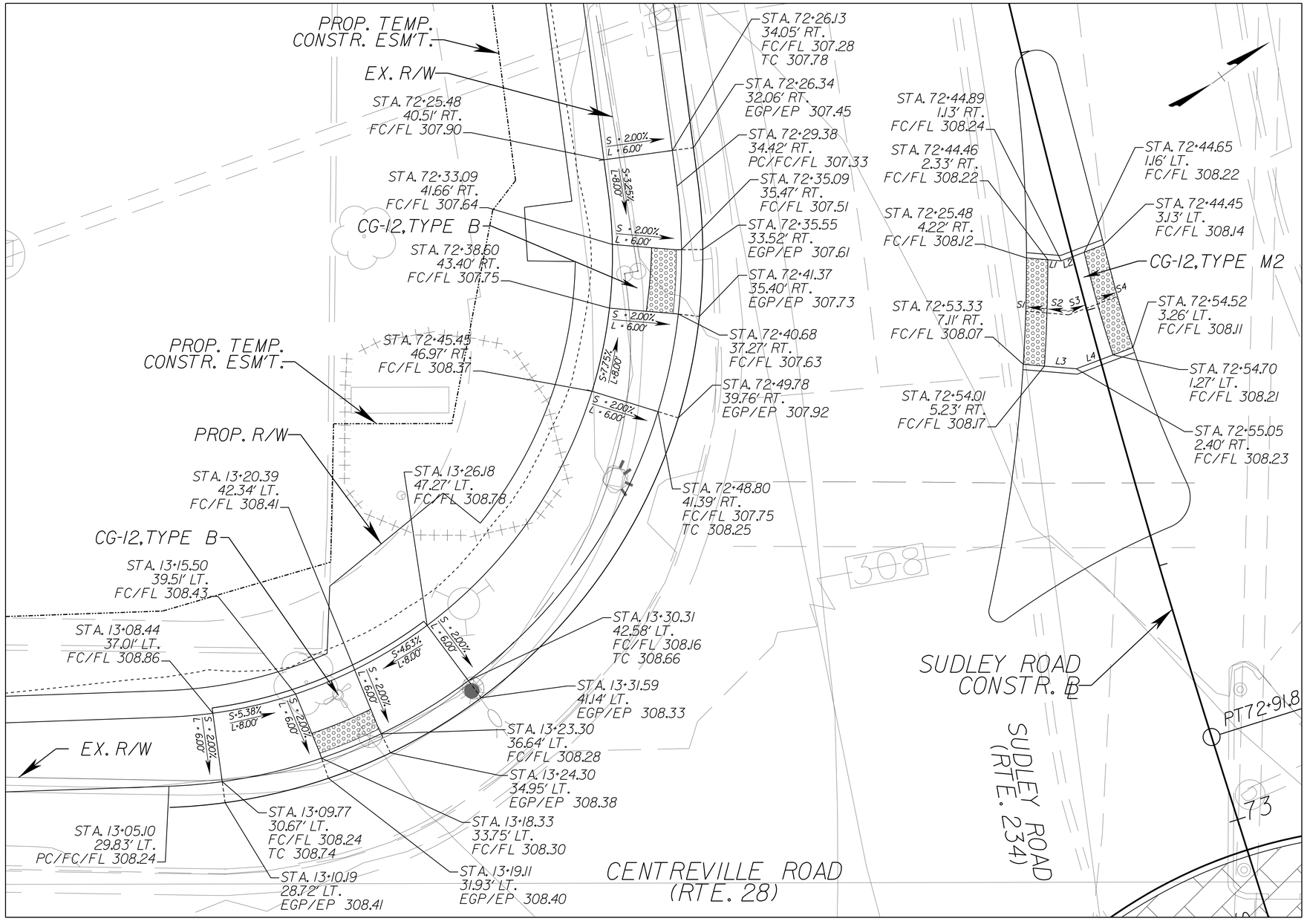
TYPICAL SECTIONS

SHEET
2A(3)
SCALE NTS

CURB RAMP DETAILS

ABBREVIATIONS

EGP - EDGE OF GUTTER PAN
EP - EDGE OF PAVEMENT
FC - FACE OF CURB
FL - FLOW LINE
L - LENGTH
PC - POINT OF CURVATURE
PT - POINT OF TANGENCY
S - SLOPE
TC - TOP OF CURB
TS - TOP OF SIDEWALK (SURFACE)



SLOPE (S)	LENGTH (L)
S1=5.00%	L1=3.29'
S2=2.00%	L2=4.28'
S3=0.90%	L3=5.01'
S4=5.00%	L4=5.69'

GRAPHIC SCALE

5' 0' 5' 10'
1" = 5'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

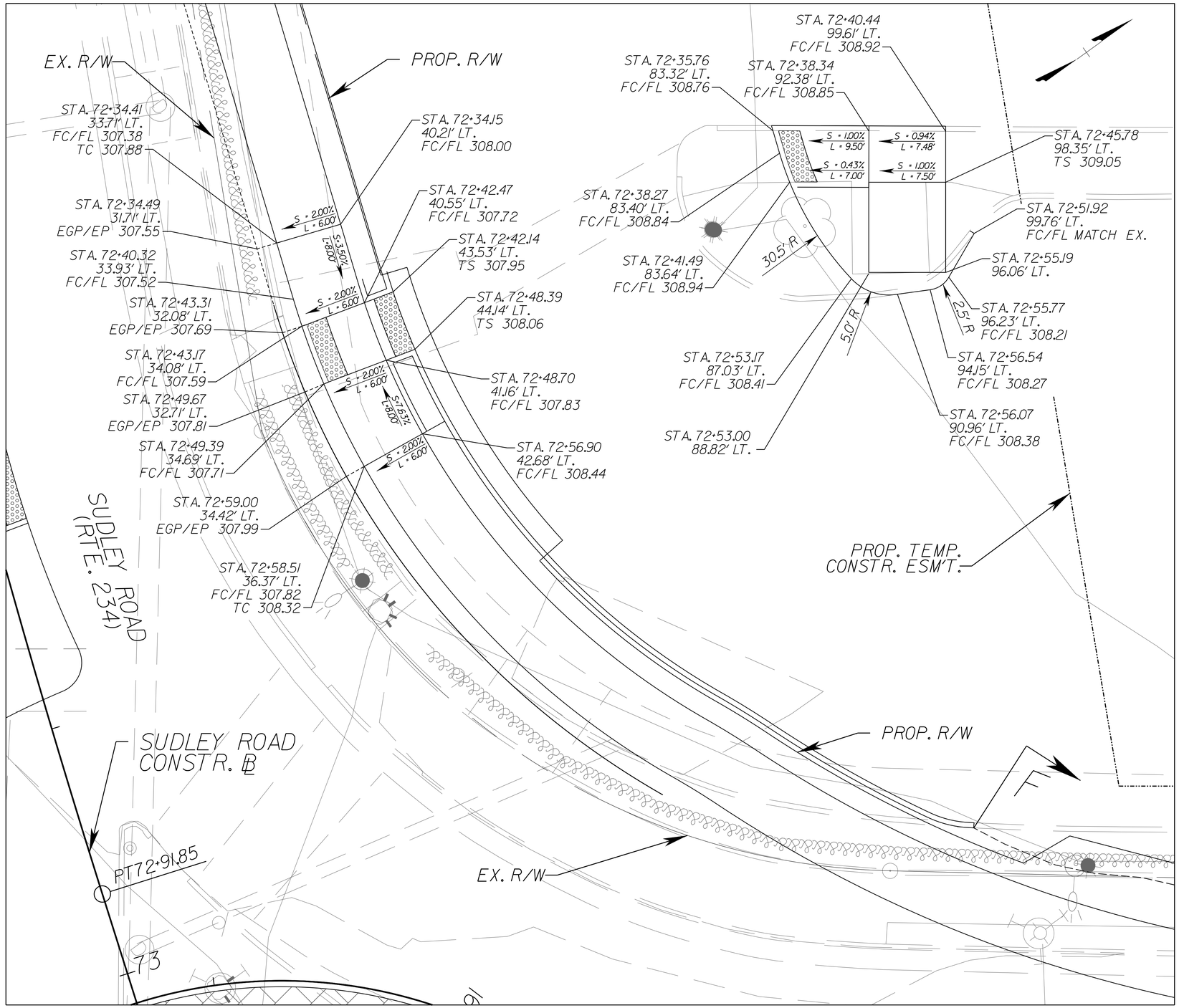
CURB RAMP DETAILS

SHEET
2B(1)
SCALE 1"=5'

CURB RAMP DETAILS

ABBREVIATIONS

EGP - EDGE OF GUTTER PAN
EP - EDGE OF PAVEMENT
FC - FACE OF CURB
FL - FLOW LINE
L - LENGTH
PC - POINT OF CURVATURE
PT - POINT OF TANGENCY
S - SLOPE
TC - TOP OF CURB
TS - TOP OF SIDEWALK (SURFACE)



GRAPHIC SCALE

5' 0' 5' 10'
1" = 5'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

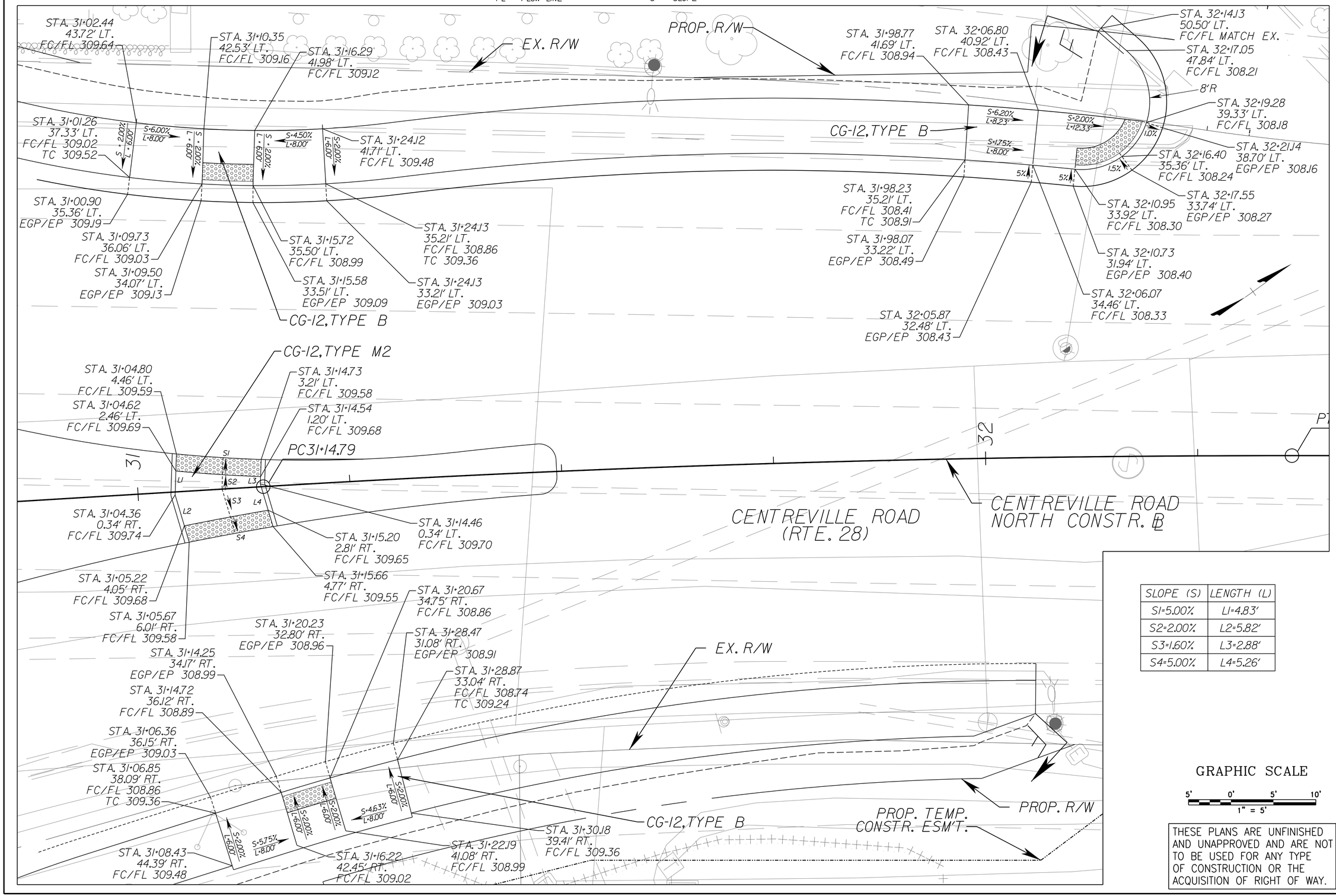
CURB RAMP DETAILS

SHEET
2B(2)
SCALE 1"=5'

CURB RAMP DETAILS

ABBREVIATIONS

EGP - EDGE OF GUTTER PAN	L - LENGTH	TC - TOP OF CURB
EP - EDGE OF PAVEMENT	PC - POINT OF CURVATURE	TS - TOP OF SIDEWALK (SURFACE)
FC - FACE OF CURB	PT - POINT OF TANGENCY	
FL - FLOW LINE	S - SLOPE	



SLOPE (S)	LENGTH (L)
S1=5.00%	L1=4.83'
S2=2.00%	L2=5.82'
S3=1.60%	L3=2.88'
S4=5.00%	L4=5.26'

GRAPHIC SCALE

5' 0' 5' 10'

1" = 5'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

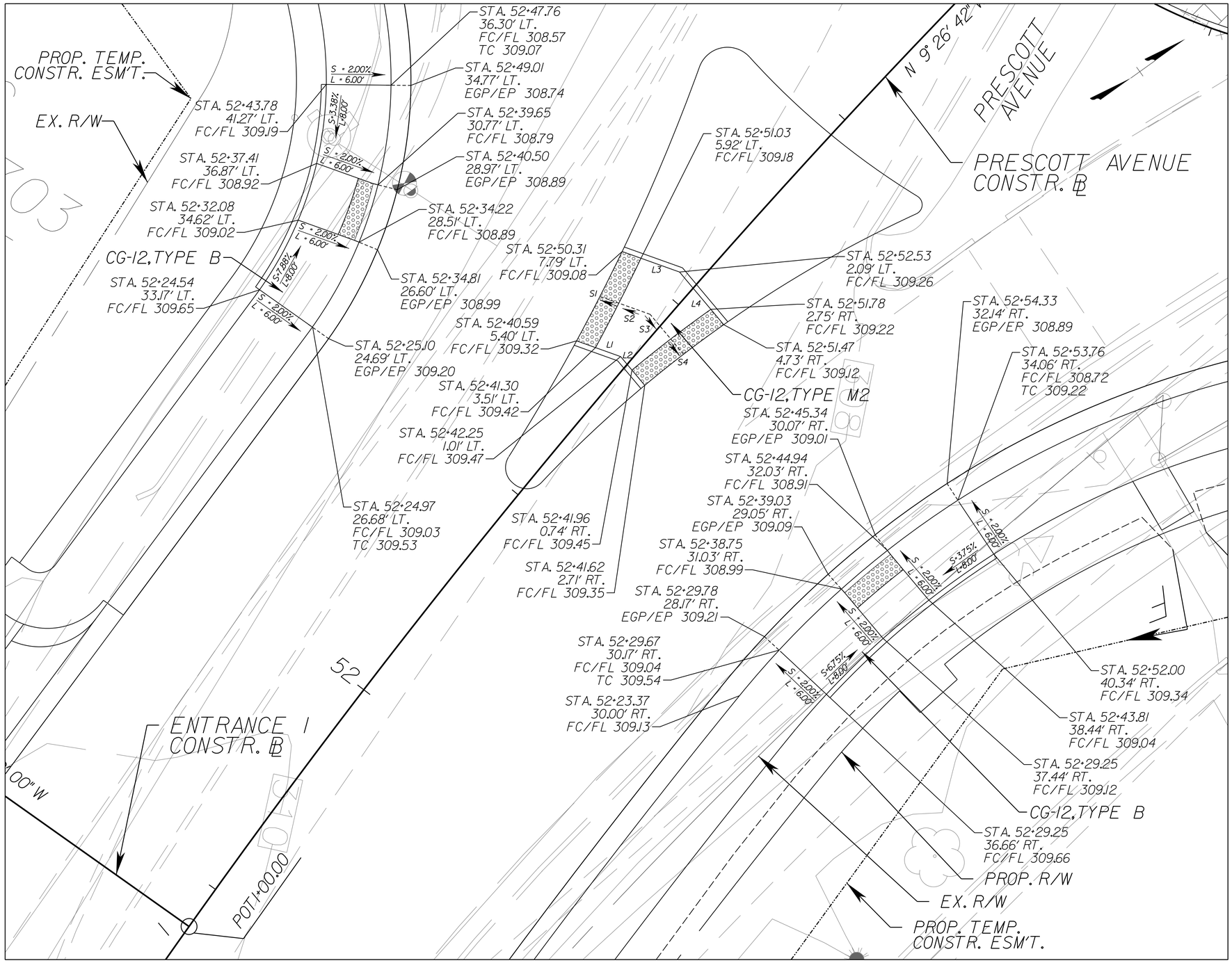
CURB RAMP DETAILS

SHEET
2B(3)
SCALE 1"=5'

CURB RAMP DETAILS

ABBREVIATIONS

EGP - EDGE OF GUTTER PAN	L - LENGTH	TC - TOP OF CURB
EP - EDGE OF PAVEMENT	PC - POINT OF CURVATURE	TS - TOP OF SIDEWALK (SURFACE)
FC - FACE OF CURB	PT - POINT OF TANGENCY	
FL - FLOW LINE	S - SLOPE	



SLOPE (S)	LENGTH (L)
S1=5.00%	L1=4.70'
S2=1.90%	L2=3.77'
S3=1.90%	L3=6.13'
S4=5.00%	L4=6.90'

GRAPHIC SCALE

5' 0' 5' 10'
1" = 5'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085		
DATE OF PLAN ISSUANCE:	TBD		
CONSULTANT PROJECT ID:	RK&K		
DESIGNED BY:	DVL	DATE:	05/27/22
DRAWN BY:	DVL	DATE:	05/27/22
CHECKED BY:	MJK	DATE:	05/27/22
APPROVED BY:		DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

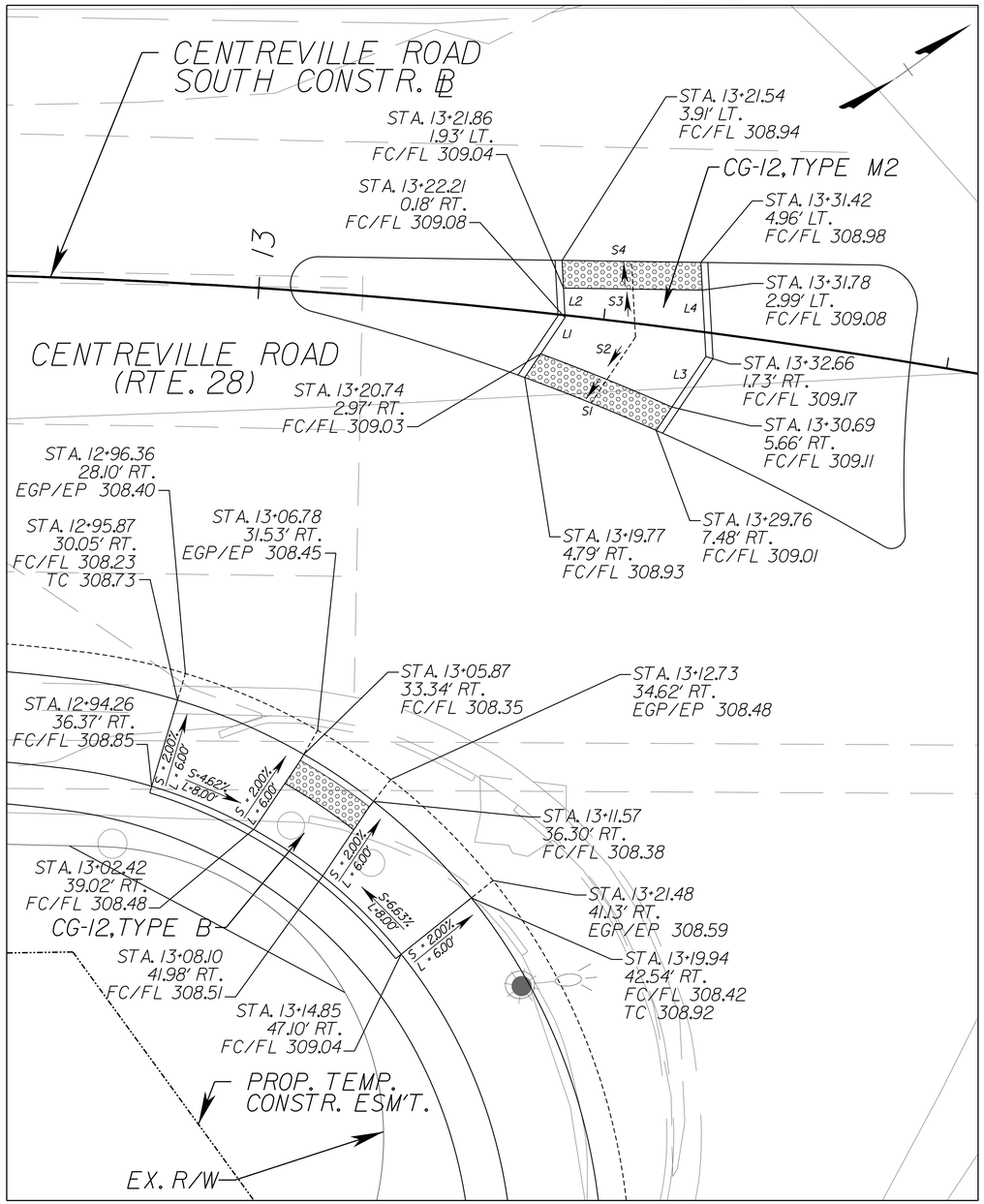
CURB RAMP DETAILS

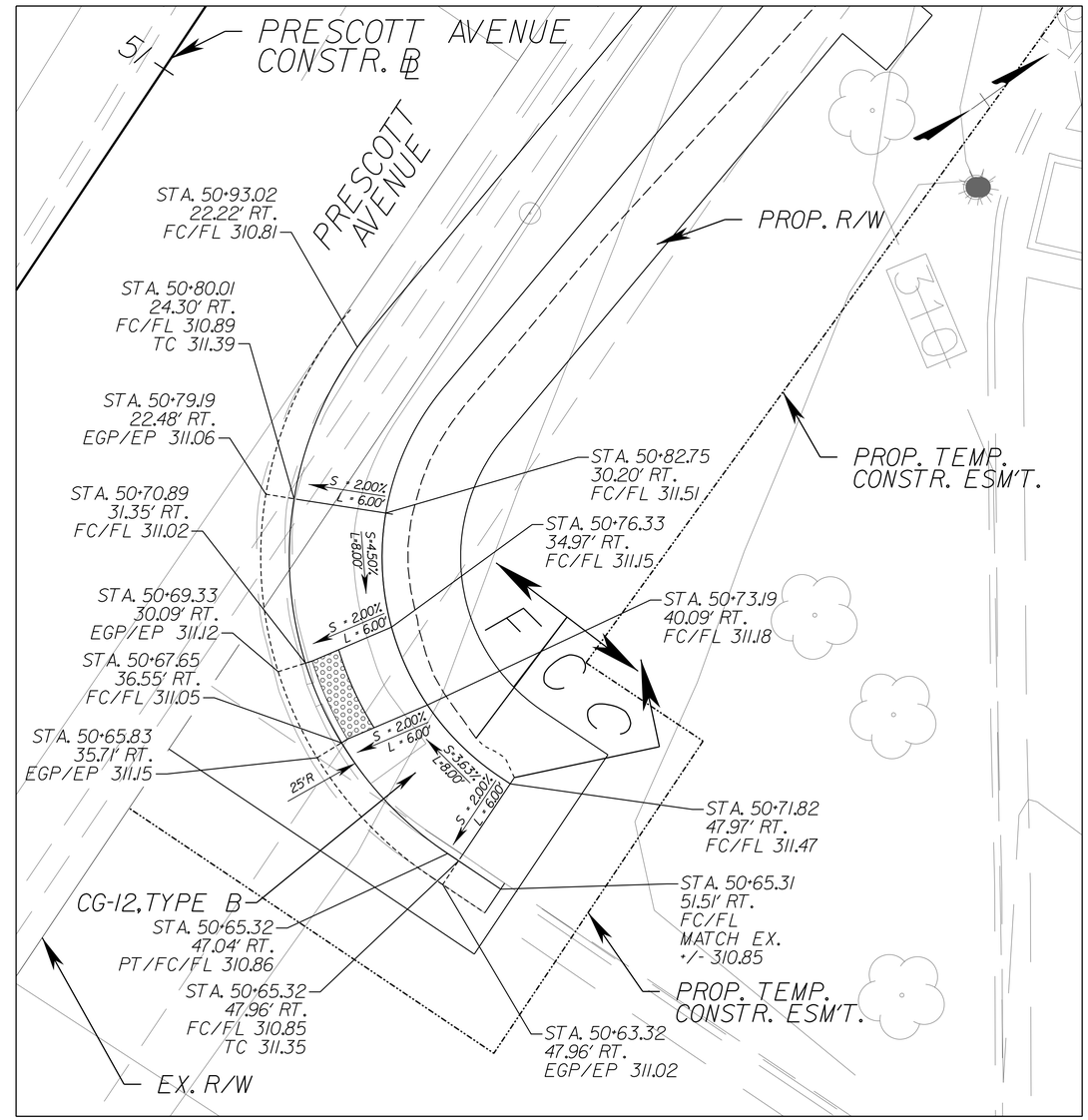
SHEET
2B(4)
SCALE 1"=5'

CURB RAMP DETAILS

ABBREVIATIONS

EGP - EDGE OF GUTTER PAN	L - LENGTH	TC - TOP OF CURB
EP - EDGE OF PAVEMENT	PC - POINT OF CURVATURE	TS - TOP OF SIDEWALK (SURFACE)
FC - FACE OF CURB	PT - POINT OF TANGENCY	
FL - FLOW LINE	S - SLOPE	





SLOPE (S)	LENGTH (L)
S1=5.00%	L1=5.21'
S2=1.60%	L2=4.14'
S3=2.00%	L3=6.42'
S4=5.00%	L4=6.81'

GRAPHIC SCALE

5' 0' 5' 10'

1" = 5'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085	
DATE OF PLAN ISSUANCE:	TBD	
CONSULTANT PROJECT ID:	RK&K	
DESIGNED BY:	DVL	DATE: 05/27/22
DRAWN BY:	DVL	DATE: 05/27/22
CHECKED BY:	MJK	DATE: 05/27/22
APPROVED BY:		DATE:

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CURB RAMP DETAILS

SHEET 2B(5)

SCALE 1"=5'

GRADING SUMMARY

LOCATION	ROADWAY CUT ②③	ROOT MAT IN CUT SECTIONS ①	ROADWAY FILL ②	TOTAL REGULAR EXCAVATION	TOTAL FILL	DEMOLITION OF PAVEMENT ②	BORROW
	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.	C.Y.
CENTREVILLE ROAD	200	64	70	77	70	187	70
SUDLEY ROAD	122	25	13	61	13	86	13
PRESCOTT AVENUE	92	41	33	54	33	79	33
ROUNDABOUT	0	51	255	51	255	287	255
Total	**414**	**182**	**370**	**243**	**370**	**640**	**370**

① INCLUDED IN TOTAL REGULAR EXCAVATION.

② THIS QUANTITY COMES FROM THE COMPUTER LISTINGS AND/OR MANUAL CROSS-SECTIONS AND MAY BE ADJUSTED FOR OTHER QUANTITIES.

③ ROADWAY CUT INCLUDES DEMOLITION OF PAVEMENT.

NOTE: THE BORROW QUANTITY SHOWN HAS NOT BEEN ADJUSTED FOR SHRINKAGE OR SWELL FACTORS. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING THE EFFECT OF THE SHRINKAGE OR SWELL FACTOR OF THE BORROW MATERIAL, AND NO ADJUSTMENT WILL BE MADE IN PAY QUANTITIES FOR THIS FACTOR. THE CONTRACTOR SHALL DETERMINE THE ACTUAL QUANTITY OF BORROW MATERIAL NEEDED TO COMPLETE THIS PROJECT.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

GRADING SUMMARY

SHEET
2C

SCALE N/A

PLAN

(A) CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 14+25.00
CENTREVILLE ROAD NORTH CONSTR. ℄
STA. 30+00.00
PRESCOTT AVENUE CONSTR. ℄
STA. 53+50.00
SUDLEY ROAD CONSTR. ℄
STA. 73+50.00

(B) ROUNDABOUT CONSTR. ℄
STA. 91+81.92
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 13+78.00 =
DELTA = 90° 00' 00" LT.

(C) ROUNDABOUT CONSTR. ℄
STA. 92+29.23
PRESCOTT AVENUE CONSTR. ℄
STA. 53+03.00 =
DELTA = 90° 00' 00" LT.

(D) ROUNDABOUT CONSTR. ℄
STA. 90+47.42
CENTREVILLE ROAD NORTH CONSTR. ℄
STA. 30+47.00 =
DELTA = 90° 00' 00" LT.

(E) ROUNDABOUT CONSTR. ℄
STA. 91+32.76
SUDLEY ROAD CONSTR. ℄
STA. 73+03.00 =
DELTA = 90° 00' 00" LT.

(F) ENTRANCE 1 CONSTR. ℄
STA. 1+00.00
PRESCOTT AVENUE CONSTR. ℄
STA. 51+70.42 =
DELTA = 90° 00' 00" LT.

(G) ENTRANCE 2 CONSTR. ℄
STA. 3+00.00
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 11+91.65 =
DELTA = 90° 00' 00" LT.

(H) ENTRANCE 3 CONSTR. ℄
STA. 5+00.00
CENTREVILLE ROAD SOUTH CONSTR. ℄
STA. 12+35.02 =
DELTA = 90° 00' 00" LT.

Curve SUDLEY_5
PI = 72+42.13
DELTA = 5° 42' 09.19" (LT)
D = 5° 43' 46"
T = 49.81'
L = 99.53'
R = 1,000.00'
PC = 71+92.32
PT = 72+91.85

Curve CENTREVILLE_N_3
PI = 31+75.46
DELTA = 3° 28' 32.08" (RT)
D = 2° 51' 53"
T = 60.68'
L = 121.32'
R = 2,000.00'
PC = 31+14.79
PT = 32+36.11

Curve ROUNDABOUT
PI = 90+00.00
DELTA = 360° 00' 00.00" (LT)
D = 12° 54' 21"
T = 0.00'
L = 295.31'
R = 47.00'
PC = 90+00.00
PT = 92+95.31

Curve CENTREVILLE_S_5
PI = 13+17.63
DELTA = 13° 33' 12.61" (RT)
D = 11° 27' 33"
T = 59.42'
L = 118.28'
R = 500.00'
PC = 12+58.22
PT = 13+76.49

Curve PRESCOTT_3
PI = 52+26.07
DELTA = 11° 10' 27.69" (RT)
D = 7° 09' 43"
T = 78.26'
L = 156.02'
R = 800.00'
PC = 51+47.81
PT = 53+03.83

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

BEGIN CONSTRUCTION
BEGIN PROJECT
STA. 10+15.00

END CONSTRUCTION
STA. 70+70.00

END CONSTRUCTION
END PROJECT
STA. 34+25.00

END CONSTRUCTION
STA. 50+60.00

CENTREVILLE ROAD (RTE. 28)
CENTREVILLE ROAD SOUTH CONSTR. ℄
CENTREVILLE ROAD NORTH CONSTR. ℄
SUDLEY ROAD (RTE. 2341)
PRESCOTT AVENUE CONSTR. ℄
ENTRANCE 1 CONSTR. ℄
ENTRANCE 2 CONSTR. ℄
ENTRANCE 3 CONSTR. ℄
SUDLEY ROAD CONSTR. ℄

CENTREVILLE MANASSAS VA, LLC
INST# 200202110019794
Tax Map #100-05-05-5A
1.5515 Acres

M C CORNER, LLC
INST# 201802230012549
Tax Map #100-04-01-1
2.4653 Acres

IRONHORSE LLC
INST# 201706080043703
Tax Map #100-01-00-5
0.2515 Acres

IRONHORSE LLC
INST# 201706080043703
Tax Map #100-01-00-6
0.1563 Acres

MATTHEW J. DRICOLL
INST# 201103300028512
Tax Map #100-01-00-7
0.1563 Acres

ROBERT P. WHETZEL AND LINDA L. WHETZEL
INST# 201809260070592
Tax Map #100-01-00-8
0.1563 Acres

JOANN M. DOBSCHEL, DONNA E. WATSON AND DIANE E. MACK
INST# 201512170032340
Tax Map #100-01-00-154
0.2153 Acres

C&F SERVICES, LLC
INST# 201802230020091
Tax Map #100-01-00-12
0.1756 Acres

AGR PROPERTIES, LP
INST# 201403190016715
Tax Map #100-01-00-115B
1.7327 Acres

FOOD LION, LLC
D.B. 2922, PG. 1221
Tax Map #100-01-00-111A
4.3662 Acres

GRAPHIC SCALE
25' 0' 25' 50'
1" = 25'

LEGEND

- C — CONSTRUCTION LIMITS IN CUT
- F — CONSTRUCTION LIMITS IN FILL
- DENOTES PROP. GRADING AGREEMENT AND TEMP. CONSTR. ESM'T.
- DENOTES EXIST. R/W
- DENOTES PROP. R/W
- DENOTES DEMOLITION OF PAVEMENT
- DENOTES FULL DEPTH PAVEMENT
- DENOTES MILL AND OVERLAY
- DENOTES MS-IA

1. 6' WIDE CONCRETE SIDEWALK
2. 3' WIDE GRASS BUFFER
3. VDOT ST'D. CG-2 REQ'D.
4. MODIFIED CG-3 REQ'D.
5. VDOT ST'D. CG-6 REQ'D.
6. VDOT ST'D. CG-9D REQ'D.
7. VDOT ST'D. CG-12B REQ'D.
8. VDOT ST'D. CG-12, TYPE M2, REQ'D.
9. VDOT ST'D. MS-1A REQ'D.
10. FULL DEPTH SAW CUT
11. TIE TO EX. CURB AND GUTTER
12. TIE TO EX. CONCRETE SIDEWALK
13. STAMPED CEMENT CONCRETE FINISH
14. TRUCK APRON
15. CLEANOUT EXISTING PIPE/STRUCTURE
16. PIPE TO BE PLUGGED AND ABANDONED
17. PIPE/STRUCTURE TO BE REMOVED
18. NOT USED
19. UNDERDRAIN, VDOT ST'D. UD-4 REQ'D.
20. VDOT ST'D. MS-2 REQ'D.
21. RELOCATE EX. UTILITY
22. REMOVE EX. LIGHT POLE
23. REMOVE EX. SIGNAL POLE

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

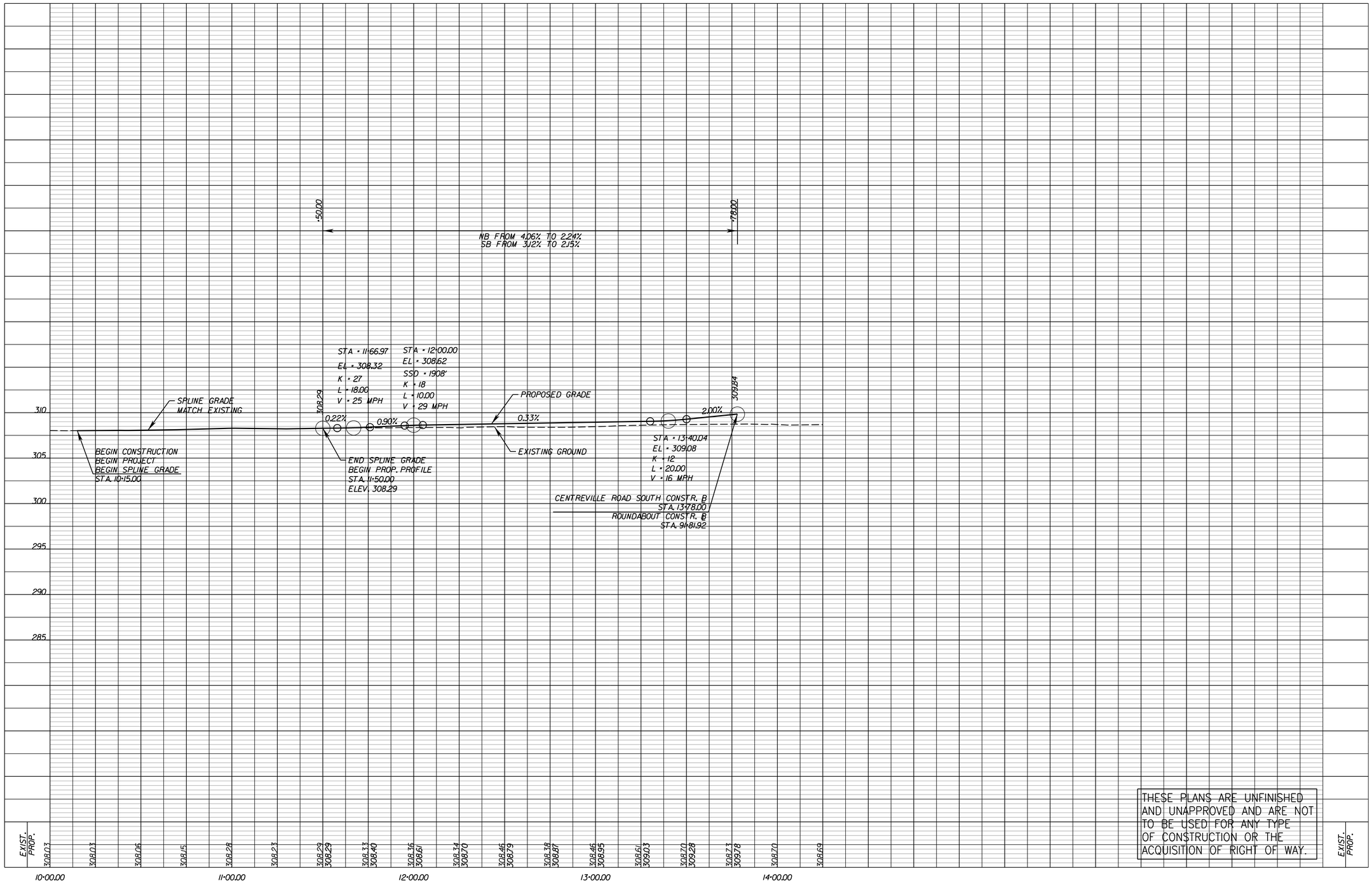
MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL DATE:	05/27/22
DRAWN BY: DVL DATE:	05/27/22
CHECKED BY: MJK DATE:	05/27/22
APPROVED BY: DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

PLAN

SHEET
3
SCALE 1"=25'

PROFILE - CENTREVILLE ROAD SOUTH



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

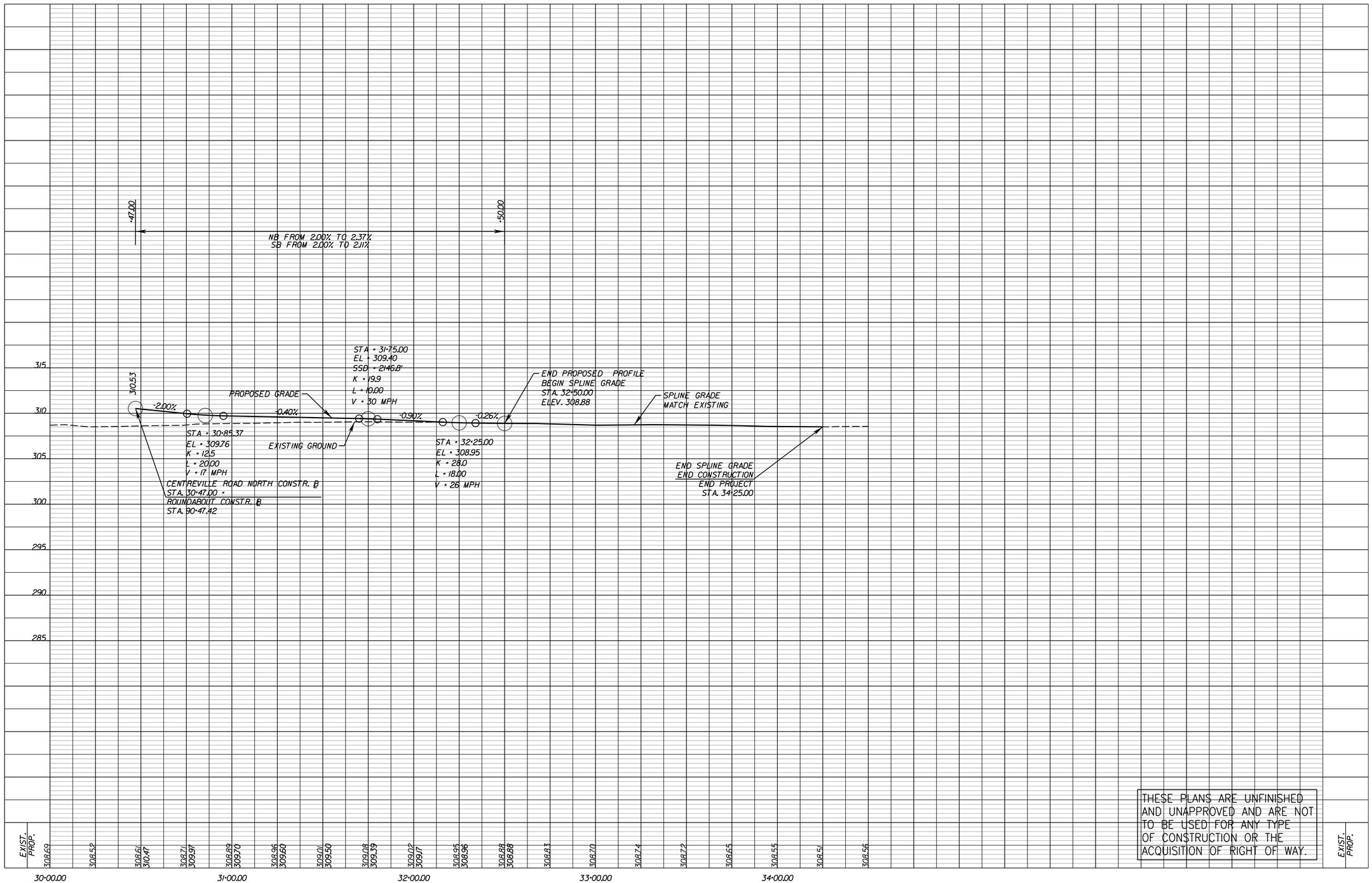
PROFILE
CENTREVILLE ROAD SOUTH

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

SHEET
3A

SCALE H: 1"=25' V: 1"=5'

PROFILE - CENTREVILLE ROAD NORTH



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

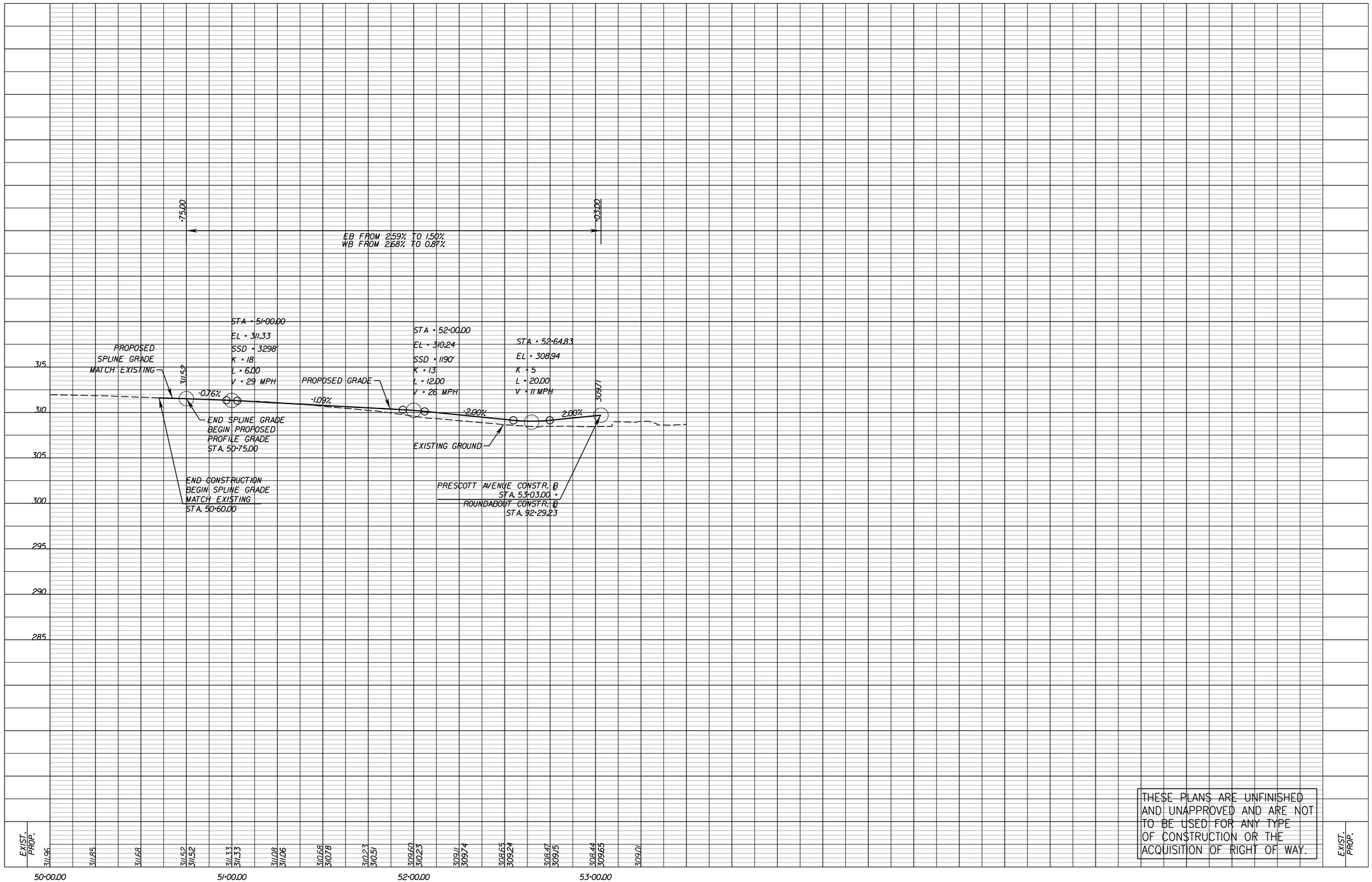
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

PROFILE
CENTREVILLE ROAD NORTH

SHEET
3B

SCALE H:1"=25' V:1"=5'

PROFILE - PRESCOTT AVENUE



60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

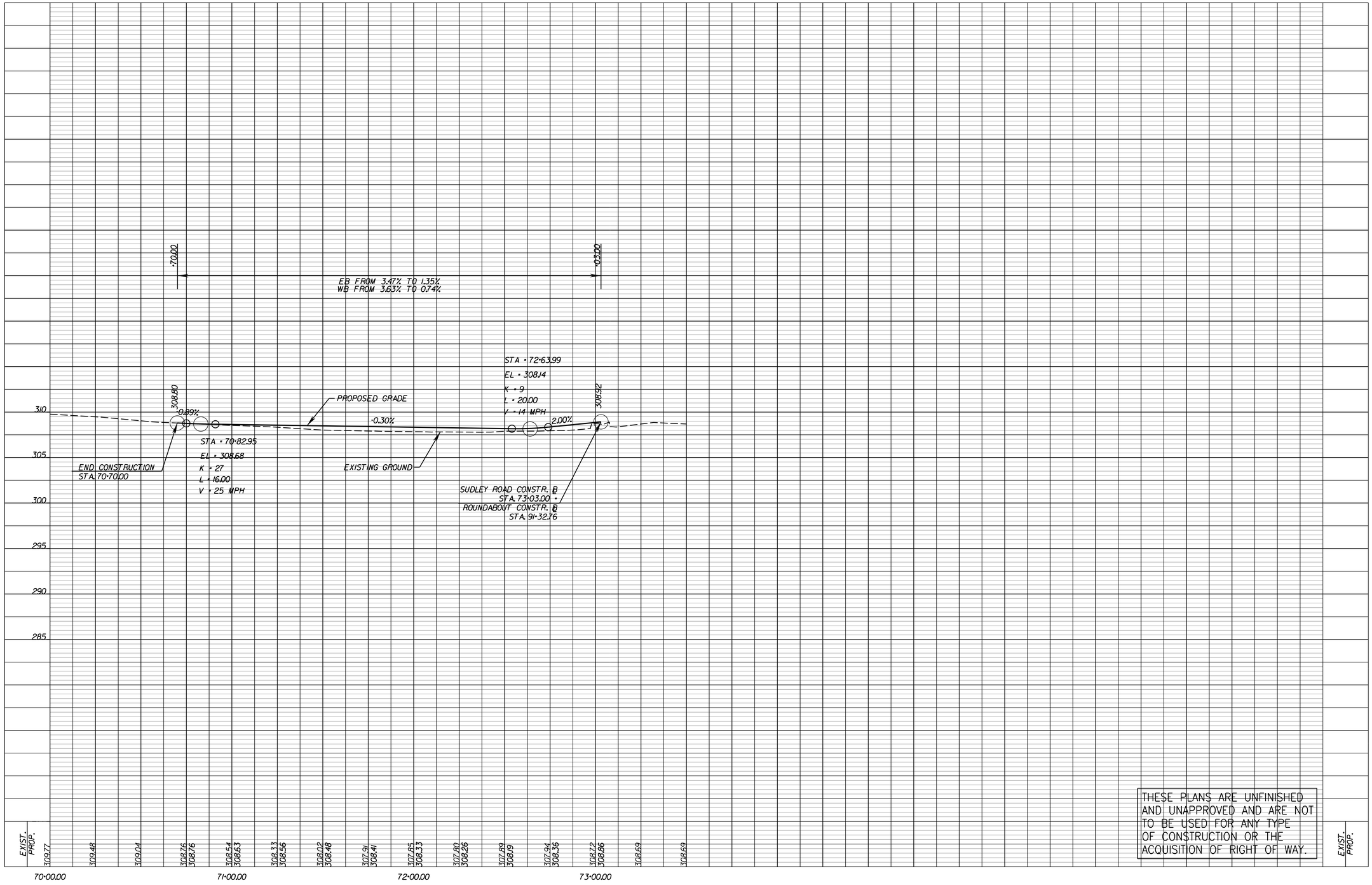
PROFILE
PRESCOTT AVENUE

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

SHEET
3C

SCALE H: 1"=25' V: 1"=5'

PROFILE - SUDLEY ROAD



60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

PROFILE
SUDLEY ROAD

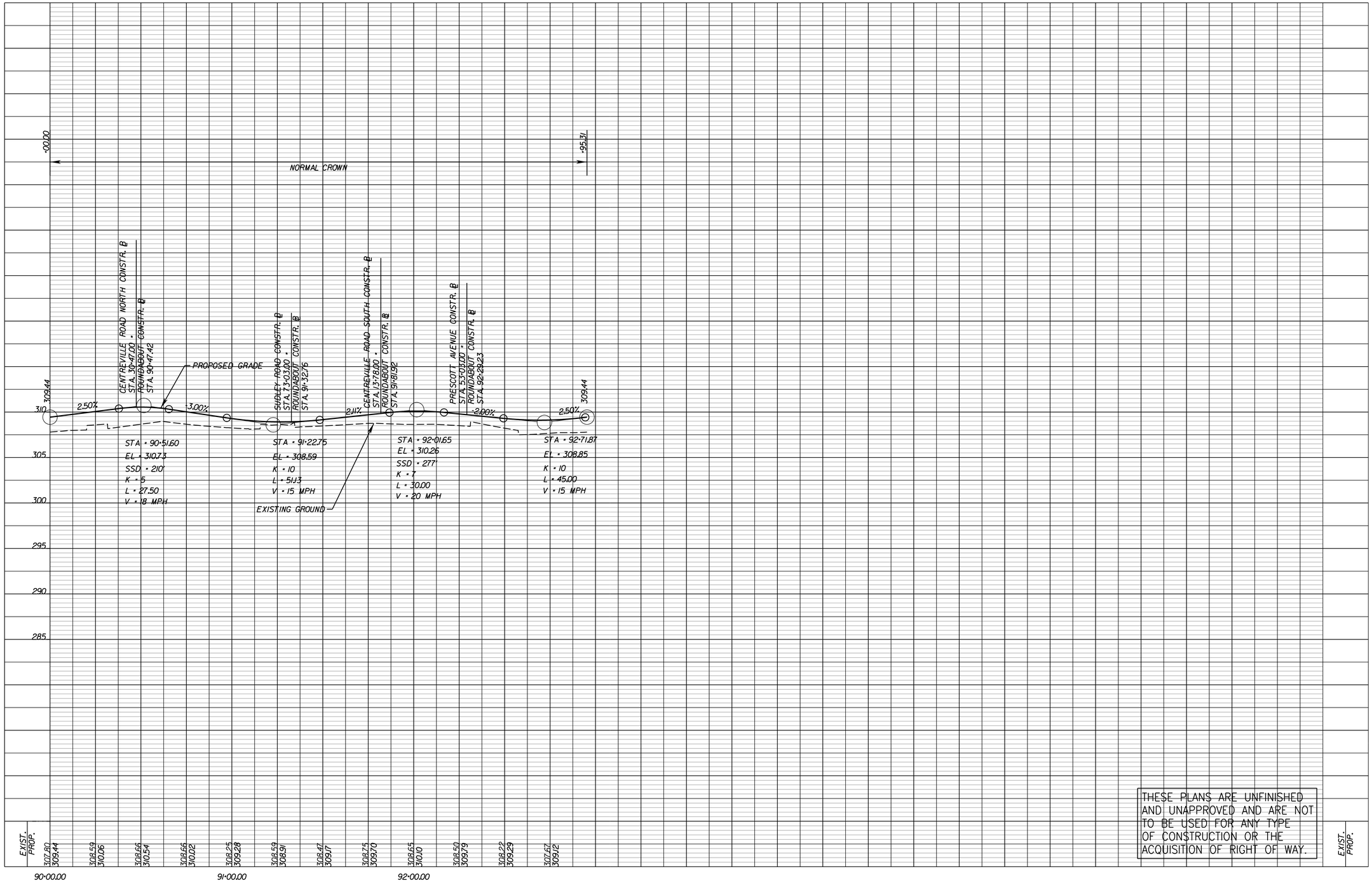
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

SHEET
3D

SCALE H: 1"=25' V: 1"=5'

PROFILE - ROUNDABOUT

GRAPHIC SCALE
5'
2.5'
0'
25'
50'
1" = 25' (H)
1" = 5' (V)



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

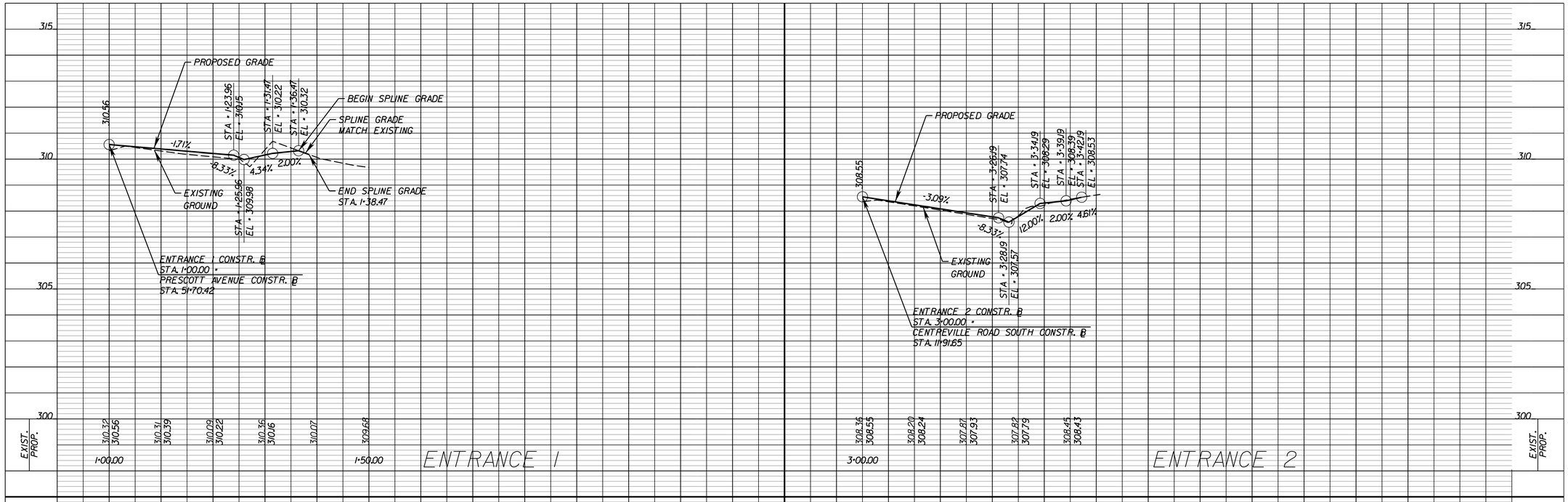
PROFILE
ROUNDABOUT

SHEET
3E

SCALE H:1"=25' V:1"=5'

PROFILE - ENTRANCES

GRAPHIC SCALE
2' 1' 0' 10' 20'
1" = 10' (H)
1" = 2' (V)



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

PROFILE
ENTRANCES

SHEET
4

SCALE H: 1"=10' V: 1"=2'

EXISTING & PROPOSED DRAINAGE DESCRIPTIONS

001
In Pl. Cl. IV Conc. DI
Top = 307.60'
Inv. In = 299.12' (From Str. 002)

002
In Pl. Cl. IV Conc. DI
Top = 307.98'
Inv. In = 303.75' (From Str. 003)
Inv. In = 299.68' (From Str. 005)
Inv. Out = 299.60'
In Pl. 42" Concrete Pipe

003
In Pl. Cl. IV Conc. DI
Top = 307.89'
Inv. In = 304.30' (From Str. 004)
Inv. Out = 304.11'
In Pl. 15" Concrete Pipe

004
In Pl. Cl. IV Conc. DI
Top = 307.54'
Inv. Out = 304.40'
In Pl. 15" Concrete Pipe

005
In Pl. Cl. IV Conc. DI
Top = 308.09'
Inv. In = 304.72' (From Str. 006)
Inv. In = 300.00' (From Str. 007)
Inv. Out = 299.89'
In Pl. 42" Concrete Pipe

006
In Pl. Cl. IV Conc. DI
Top = 307.25'
Inv. Out = 304.98'
In Pl. 15" Concrete Pipe

007
In Pl. SSMH
Top = 308.87'
Inv. In = 301.25' (From Str. 008)
Inv. In = 300.28' (From Str. 027)
Inv. In = 300.89' (From Str. 017)
Inv. Out = 300.10'
In Pl. 42" Concrete Pipe

008
In Pl. SSMH
Top = 308.56'
Inv. In = 302.00' (From Str. 009)
Inv. In = 301.99' (From Str. 010)
Inv. Out = 301.92'
In Pl. 24" Concrete Pipe

009
In Pl. Metal Grate
Top = 307.66'
Inv. Out = 303.38'
In Pl. 12" Concrete Pipe

010
In Pl. Cl. IV Conc. DI
Top = 307.77'
Inv. In = 302.28' (From Str. 011)
Inv. In = 303.07' (From Str. 014)
Inv. Out = 303.00'
In Pl. 24" Concrete Pipe

011
In Pl. Cl. IV Conc. DI
Top = 307.74'
Inv. In = 304.68' (From Str. 012)
Inv. In = 304.68' (From Str. 013)
Inv. Out = 307.74'
In Pl. 15" Concrete Pipe

012
In Pl. Metal Grate
Top = 307.97'
Inv. Out = 305.07'
In Pl. 15" Concrete Pipe

013
In Pl. Metal Grate
Top = 307.71'
Inv. Out = 305.20'
In Pl. 15" Concrete Pipe

014
In Pl. Cl. IV Conc. DI
Top = 307.91'
Inv. In = 304.50' (From Str. 015)
Inv. Out = 304.32'
In Pl. 15" Concrete Pipe

015
In Pl. Cl. IV Conc. DI
Top = 308.43'
Inv. In = 305.17' (From Str. 016)
Inv. Out = 305.05'
In Pl. 15" Concrete Pipe

016
Cl. IV Conc. Endsection
Inv. = 307.01'
In Pl. 12" Metal Pipe

017
In Pl. Cl. IV Conc. DI
Top = 307.60'
Inv. In = 302.23' (From Str. 018)
Inv. In = 302.27' (From Str. 022)
Inv. Out = 301.96'
In Pl. 24" Concrete Pipe

018
In Pl. Cl. IV Conc. DI
Top = 309.72'
Inv. In = 305.04' (From Str. 019)
Inv. In = 305.26' (From Str. 020)
Inv. Out = 304.92'
In Pl. 18" Concrete Pipe

019
In Pl. Cl. IV Conc. DI
Top = 310.96'
Inv. Out = 308.26'
In Pl. 15" Concrete Pipe

020
In Pl. Cl. IV Conc. DI
Top = 312.92'
Inv. Out = 306.72'
In Pl. 18" Concrete Pipe

021
In Pl. Metal Grate
Top = 313.13'
Inv. Out = 310.44'
In Pl. 8" Plastic Pipe

022
In Pl. Cl. IV Conc. DI
Top = 308.43'
Inv. In = 302.54' (From Str. 023)
Inv. Out = 302.45'
In Pl. 24" Concrete Pipe

023
In Pl. Cl. IV Conc. DI
Top = 309.47'
Inv. In = 303.78' (From Str. 024)
Inv. Out = 303.69'
In Pl. 21" Concrete Pipe

024
In Pl. Cl. IV Conc. DI
Top = 310.43'
Inv. In = 304.77' (From Str. 025)
Inv. Out = 304.67'
In Pl. 21" Concrete Pipe

025
In Pl. Cl. IV Conc. DI
Top = 310.42'
Inv. In = 305.34' (From Str. 026)
Inv. Out = 305.24'
In Pl. 18" Concrete Pipe

026
In Pl. Cl. IV Conc. DI
Top = 310.90'
Inv. Out = 306.11'
In Pl. 15" Concrete Pipe

027
In Pl. SSMH
Top = 308.53'
Inv. In =(From Str. 028) (Could Not Access)
Inv. In = 302.88' (From Str. 030)(Per Record)
Inv. Out = 300.68' (Per Record)
In Pl. 30" Concrete Pipe

028
In Pl. Cl. IV Conc. DI
Top = 308.91'
Inv. In = 304.02' (From Str. 029)
Inv. Out = 303.95'
In Pl. 18" Concrete Pipe

029
In Pl. Cl. IV Conc. DI
Top = 309.38'
Inv. Out = 304.71'
In Pl. 18" Concrete Pipe

030
In Pl. Cl. IV Conc. DI
Top = 308.42'
Inv. In = 303.22' (From Str. 31)
Inv. Out = 303.12'
In Pl. 24" Concrete Pipe

031
In Pl. Cl. IV Conc. DI
Top = 308.26'
Inv. In = 304.21' (From Str. 032)
Inv. In = 303.63' (From Str. 036)
Inv. Out = 303.56'
In Pl. 24" Concrete Pipe

032
In Pl. Cl. IV Conc. DI
Top = 308.44'
Inv. In = 304.75' (From Str. 033)
Inv. Out = 304.70'
In Pl. 15" Concrete Pipe

033
In Pl. Cl. IV Conc. DI
Top = 308.64'
Inv. In = 305.48' (From Str. 034)
Inv. In = 305.45' (From Str. 035)
Inv. Out = 305.05'
In Pl. 15" Concrete Pipe

034
In Pl. Cl. IV Conc. DI
Top = 309.01'
Inv. Out = 305.81'
In Pl. 12" Concrete Pipe

035
In Pl. Cl. IV Conc. DI
Top = 308.82'
Inv. Out = 305.65'
In Pl. 15" Concrete Pipe

036
In Pl. Cl. IV Conc. DI
Top = 308.11'
Inv. In = 305.51' (From Str. 037)
Inv. In = 304.91' (From Str. 038)
Inv. In = 304.91' (From Str. 039)
Inv. Out = 304.81'
In Pl. 18" Concrete Pipe

037
In Pl. Cl. IV Conc. DI
Top = 307.80'
Inv. Out = 305.84'
In Pl. 15" Concrete Pipe

038
In Pl. Metal Grate
Top = 307.70'
Inv. Out = 305.10'
In Pl. 15" Concrete Pipe

039
In Pl. Cl. IV Conc. DI
Top = 308.36'
Inv. Out = 305.56'
In Pl. 15" Concrete Pipe

040
In Pl. SSMH (Abandoned)
Top = 309.60'
Inv. In = 307.11' (From Str. East)
Inv. Out = 307.01'
In Pl. 12" Metal Pipe

3-1
Modify Existing Drop Inlet
Adjust to Grade, Lower 0.1'
Add DI-2C Top, L=18'
Proposed Top Elev.=307.63'
Connect to Cl. IV Conc. Pipe Inv. 304.52'

3-1 — 3-4
Existing Pipe To Be Extend with 8'-15" Cl. IV Conc. Pipe Req. (2' Cover)
Slit-Tight Joint Type
Inv.(In) 304.52' Inv.(Out) 304.20'

3-2
Modify Existing Drop Inlet
Adjust to Grade, Lower 0.1'
Add DI-2B Top, L=4'
Proposed Top Elev.=307.30'

3-2 — 3-3
22' - 15" Cl. IV Conc. Pipe Req.(1' Cover)
Slit-Tight Joint Type
Inv.(In) 304.40' Inv.(Out) 304.20'

3-3
1 Std. DI-3C Req.
L=10', H=3.4', Inv=304.10'
Std. IS-1 Req.

3-3 — 3-4
28' - 15" Cl. IV Conc. Pipe Req.(2' Cover)
Slit-Tight Joint Type
Inv.(In) 304.10' Inv.(Out) 303.80'

3-4
1 Std. DI-3B Req.
L=12', H=4.0', Inv=303.70'
Std. IS-1 Req.

3-4 — 3-6
53' - 24" Cl. IV Conc. Pipe Req.(3' Cover)
Slit-Tight Joint Type
Inv.(In) 303.70' Inv.(Out) 303.40'

3-5
1 Std. DI-2C Req.
L=6', H=4.1', Inv=304.30'
Std. IS-1 Req.

3-5 — 3-6
21' - 15" Cl. IV Conc. Pipe Req.(3' Cover)
Slit-Tight Joint Type
Inv.(In) 304.30' Inv.(Out) 304.10'

3-6
1 Std. DI-3B Req.
L=4', H=5.5', Inv=303.30'
Std. IS-1 Req.

3-6 — 3-7
67' - 24" Cl. IV Conc. Pipe Req.(4' Cover)
Slit-Tight Joint Type
Inv.(In) 303.30' Inv.(Out) 302.90'

3-7
8.7 LF Std. MH-1 or 2 Req.
1 Std. MH-1 Frame & Cover Req.
Connect to Existing 24" Conc. Pipe, Inv 301.60
Std. IS-1 Req.

3-8
Adjust Existing Manhole
Adjust to Grade, Raise 0.6'
1 Std. MH-1 Frame & Cover Req.
Proposed Top Elev.=309.10'

3-9
1 Std. DI-3B Req.
L=4', H=4.2', Inv=304.90'
Std. IS-1 Req.

3-9 — 3-10
30' - 15" Cl. IV Conc. Pipe Req.(2' Cover)
Slit-Tight Joint Type
Inv.(In) 304.90' Inv.(Out) 304.40'

3-10
1 Std. DI-3A Req.
H=4.6', Inv=304.30'
Std. IS-1 Req.

3-10 — 3-14
10' - 15" Cl. IV Conc. Pipe Req.(3' Cover)
Slit-Tight Joint Type
Inv.(In) 304.30' Inv.(Out) 304.00'

3-11
1 Std. DI-3B Req.
L=6', H=4.2', Inv=306.10'
Std. IS-1 Req.

3-11 — 3-12
4' - 15" Cl. IV Conc. Pipe Req.(2' Cover)
Slit-Tight Joint Type
Inv.(In) 306.10' Inv.(Out) 306.00'

3-12
Modify Existing Drop Inlet
Convert to Manhole,
1 Std. MH-1 Frame & Cover Req.
Adjust to Grade, Raise 0.3'
Proposed Top Elev.=310.02'

3-13
1 Std. DI-3B Req.
L=4', H=6.3', Inv=302.80'
Connect to Existing 18" Conc. Pipe, Inv 302.86'
Std. IS-1 Req.

3-13 — 3-14
20' - 24" Cl. IV Conc. Pipe Req.(4' Cover)
Slit-Tight Joint Type
Inv.(In) 302.80' Inv.(Out) 302.60'

3-14
1 Std. DI-3B Req.
L=4', H=6.7', Inv=302.18'
Connect to Existing 24" Conc. Pipe, Inv 302.38'
Std. IS-1 Req.

3-14 — 3-15
Existing Pipe To Be Extend with 10'-24" Cl. IV Conc. Pipe Req. (4' Cover)
Slit-Tight Joint Type
Inv.(In) 302.18' Inv.(Out) 300.89'

3-15
Modify Existing Manhole
Adjust to Grade, Raise 2.2'
1 Std. MH-1 Frame & Cover Req.
Proposed Top Elev.=311.04'

3-16
1 Std. DI-2B Req.
L=6', H=4.2', Inv=304.40'
Std. IS-1 Req.

3-17
81 LF Std. MH-1 or 2 Req., D=6'
1 Std. MH-1 Frame & Cover Req.
Connect to Existing 42" Conc. Pipe, Inv 300.38'
Connect to Existing 42" Conc. Pipe, Inv 300.38'
Std. IS-1 Req.

3-16 — 3-17
2' - 15" Cl. IV Conc. Pipe Req.(2' Cover)
Slit-Tight Joint Type
Inv.(In) 304.40' Inv.(Out) 304.30'

3-18
1 Mod. DI-3B Req.
L=4', H=3.1', Inv=305.00'
Modified To Be Less Than Minimum Structure Height
Std. IS-1 Req.

3-18 — 3-1
43' - 15" Cl. IV Conc. Pipe Req.(2' Cover)
Slit-Tight Joint Type
Inv.(In) 305.00' Inv.(Out) 304.55'

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

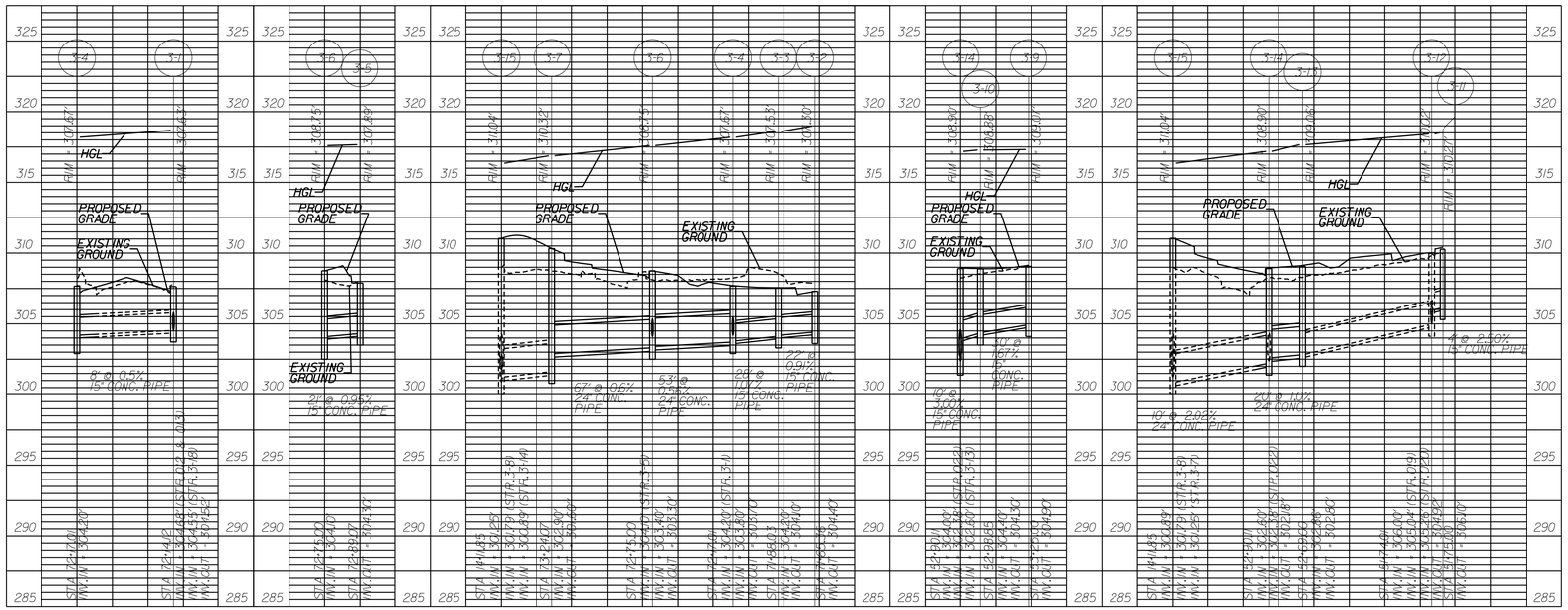
MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: MJD	DATE: 05/27/22
DRAWN BY: MJD	DATE: 05/27/22
CHECKED BY: TIS	DATE: 05/27/22
APPROVED BY:	DATE:

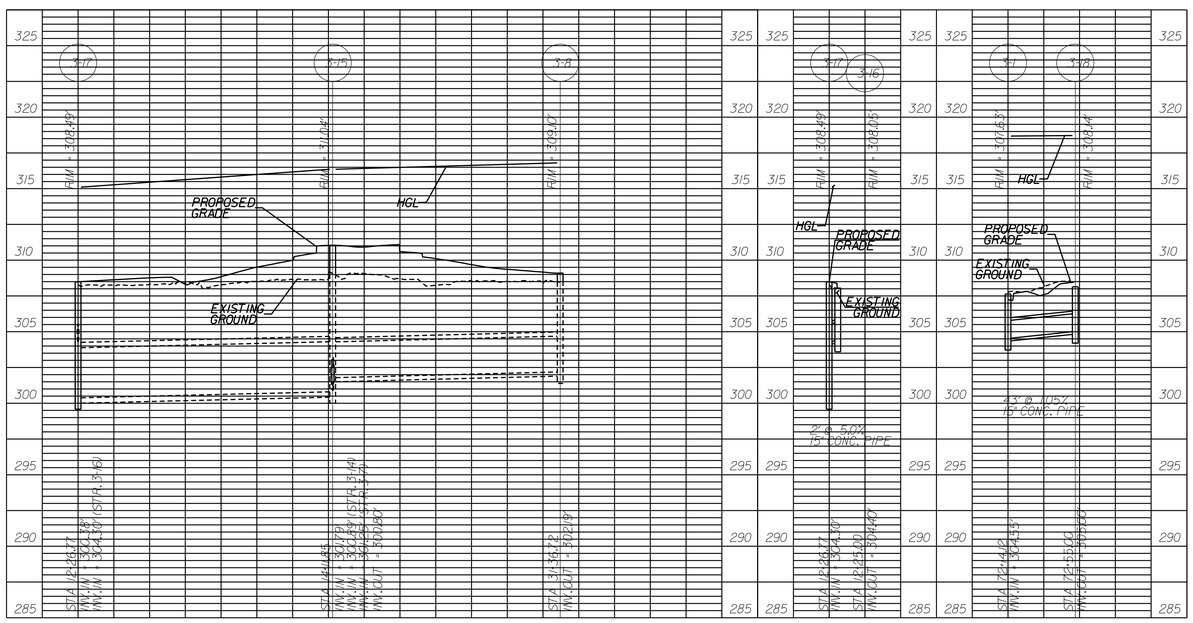
EXISTING & PROPOSED DRAINAGE DESCRIPTIONS

SHEET
5

SCALE: N/A

STORM SEWER PROFILES





VERTICAL SCALE
0 5' 10'

HORIZONTAL SCALE
0 50' 100'

Notes:

1) Only existing Utilities, at the time of the survey, are shown on the Storm Sewer Pipe Profiles. These profiles do not reflect either planned re-location of Utilities or proposed Utilities. The Contractor is also directed to any Utility Plans that may exist as part of this plan assembly.

2) Not all Utilities are shown on the Storm Sewer Profiles, only those Utilities listed on the Utility Test Hole Data Sheet with the addition of Sanitary Sewer line crossings.

3) All Utility locations are approximate, and are based on information from the project's Test Hole Data Sheet. Utility information shown is specific to its corresponding Utility Test Hole location.

4) Utility Test Hole information is located on Sheet 1H.

5) Utility clearance dimensions shown assume the use of concrete Storm Sewer Pipe and corresponding pipe thicknesses (worst case scenario).

6) A post installation visual/video camera inspection shall be conducted by the Contractor on all storm sewer pipe and a select number of pipe culverts. Inspections shall be perfomed in accordance with Section 302.03(d) of the VDOT 2020 Road and Bridge Specifications.

7) Wherever concrete pipe is utilized, class shall be CI. IV per DCSM 8-300J.

8) The surcharging HGL is an existing condition. Additional discussion can be found on sheet 7(5) in the Water Quantity Section.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: MJD DATE: 05/27/22
DRAWN BY: MJD DATE: 05/27/22
CHECKED BY: TIS DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

STORM SEWER PROFILES

SHEET
6

SCALE: N/A

INLET COMPUTATIONS

FORM LD 204 **STORMWATER INLET COMPUTATIONS** SHEET 1 OF 3

ROUTE CENTREVILLE ROAD - ROUTE 28 **PROJECT** SUDLEY ROAD/CENTREVILLE ROAD ROUNDABOUT **DESIGNER:** MJD **CHECKED:** TIS **DATE** 5/27/2022 **UNITS** ENGLISH

INLET																														Sag Inlets Only					
NUMBER	TYPE	LENGTH (FT; M)	STATION	DRAINAGE AREA (AC; HA)	C	CA	ΣCA	I (IN/HR; mm/HR)	Q INCR. (CFS; CMS)	Qc CARRYOVER (CFS; CMS)	QT GUTTER FLOW (CFS; CMS)	S GUTTER SLOPE (FT/FT; M/M)	Sx CROSS SLOPE (FT/FT; M/M)	T (SPREAD) (FT; M)	W (GUTTER WIDTH) (FT; M)	W/T	Sw (GUTTER SLOPE) (FT/FT; M/M)	Sw/Sx	Eo (App. 9C-8)	a	S'w	Se	COMPUTED LENGTH L_T (FT; M)	L, SPECIFIED LENGTH (FT; M)	L/LT	E (App. 9C-18)	Q INTERCEPTED (CFS; CMS) or d/h	Qb CARRYOVER (CFS; CMS)	Depth at Curb (IN; MM)	Allowable Ponding Depth d (FT; M)	Height of Curb Opening h (FT; M)	d/h	Depth at Inlet (IN; MM)	T SPREAD @ SAG (FT; M)	REMARKS
003	DI-3B	10.000	10+80.15	0.330	0.90	0.297																													
			-25.270'LEF	0.100	0.35	0.035																													
							0.332	4	1.328	0	1.328	0.0027	0.0376	6.136	2.000	0.3259	0.0833	2.2154	0.730	3.10	0.1290	0.1318	4.805	10.000	2.081	1.000	1.328	0.000	3.866						
005	DI-4A	4.000	11+58.95	0.050	0.90	0.045																													Back/Lt.
			27.990'RIGI	0.010	0.35	0.0035																													Back/Lt.
							0.049	4	0.196	0																									Back/Lt.
				0.210	0.90	0.189																													Ahead/Rt.
				0.020	0.35	0.007																													Ahead/Rt.
							0.196	4	0.784	0		0.001	0.0367	6.134	2.000	0.3261	0.0833	2.2698		3.12															Ahead/Rt.
											0.980	0.001												4			0.980		1.756	0.294	0.458	0.64192	3.756	3.988	Weir Flow
024	DI-4A	4.000	50+64.96	0.030	0.90	0.027																													Back/Lt.
			120.820'RIC	0.010	0.35	0.0035																													Back/Lt.
							0.031	4	0.124	0		0.001	0.0208	2.140	2.000	0.9346	0.0833	4.0048		3.50															Back/Lt.
				0.030	0.90	0.027																													Ahead/Rt.
				0.010	0.35	0.0035																													Ahead/Rt.
							0.031	4	0.124	0																									Ahead/Rt.
											0.248	0.001												4			0.248		0.702	0.166	0.458	0.36245	2.702	2.814	Weir Flow
030	DI-3D	2.500	32+70.99	0.260	0.90	0.234																													
			-28.830'LEF	0.040	0.35	0.014																													
							0.248	4	0.992	0	0.992	0.0052	0.0410	4.382	2.000	0.4564	0.0833	2.0317	0.867	3.02	0.1256	0.1500	4.789	2.500	0.522	0.735	0.729	0.263	3.171						
031	DI-3D	2.500	33+35.88	0.100	0.90	0.09																													
			-29.320'LEF	0.030	0.35	0.0105																													
							0.101	4	0.404	0.263	0.667	0.0049	0.0419	3.593	2.000	0.5566	0.0833	1.9881	0.932	2.99	0.1247	0.1582	3.857	2.500	0.648	0.847	0.565	0.102	2.800						
032	DI-3B	10.000	33+40.86	0.230	0.90	0.207																													
			27.740'RIGI	0.050	0.35	0.0175																													
							0.225	4	0.9	0	0.900	0.0052	0.0208	5.910	2.000	0.3384	0.0833	4.0048	0.823	3.50	0.1458	0.1408	4.774	10.000	2.095	1.000	0.900	0.000	2.975						
036	DI-3D	2.500	34+03.99	0.490	0.80	0.392																													Back/Lt.
			-29.430'LEFT				0.392	4	1.568	0		0.001	0.0419	7.679	2.000	0.2605	0.0833	1.9881		2.99															Back/Lt.
				0.070	0.90	0.063																													Ahead/Rt.
				0.010	0.35	0.0035																													Ahead/Rt.
							0.067	4	0.268	0.102																									Ahead/Rt.
											1.938	0.001												2.5			1.938		3.204	0.335	0.458	0.73144	5.204	6.373	Weir Flow
3-1	DI-2C	18.000	72+14.12	0.030	0.90	0.027																													Back/Lt.
			30.590'RIGI	0.020	0.35	0.007																													Back/Lt.
							0.034	4	0.136	0																									Back/Lt.
				0.160	0.90	0.144																													Ahead/Rt.
				0.020	0.35	0.007																													Ahead/Rt.
							0.151	4	0.604	0		0.0010	0.0302	6.040	2.000	0.3311	0.0833	2.7583		3.27															Ahead/Rt.
											0.740	0.0010			2.000									18			0.740		1.823	0.242	0.458	0.52838	3.929	5.029	Weir Flow
3-10	DI-3A	2.500	52+98.85	0.030	0.90	0.027																													Back/Lt.
			57.860'RIGI	0.010	0.35	0.0035																													Back/Lt.
							0.031	4	0.124	0		0.001	0.0200	2.146	2.000	0.932	0.0833	4.165		3.52															Back/Lt.

INLETSOFT BY ENSOFTEC DATE: 5/27/2022

FORM LD 204 **STORMWATER INLET COMPUTATIONS** SHEET 2 OF 3

ROUTE CENTREVILLE ROAD - ROUTE 28 **PROJECT** SUDLEY ROAD/CENTREVILLE ROAD ROUNDABOUT **DESIGNER:** MJD **CHECKED:** TIS **DATE** 5/27/2022 **UNITS** ENGLISH

INLET																														Sag Inlets Only					
NUMBER	TYPE	LENGTH (FT; M)	STATION	DRAINAGE AREA (AC; HA)	C	CA	ΣCA	I (IN/HR; mm/HR)	Q INCR. (CFS; CMS)	Qc CARRYOVER (CFS; CMS)	QT GUTTER FLOW (CFS; CMS)	S GUTTER SLOPE (FT/FT; M/M)	Sx CROSS SLOPE (FT/FT; M/M)	T (SPREAD) (FT; M)	W (GUTTER WIDTH) (FT; M)	W/T	Sw (GUTTER SLOPE) (FT/FT; M/M)	Sw/Sx	Eo (App. 9C-8)	a	S'w	Se	COMPUTED LENGTH L_T (FT; M)	L, SPECIFIED LENGTH (FT; M)	L/LT	E (App. 9C-18)	Q INTERCEPTED (CFS; CMS) or d/h	Qb CARRYOVER (CFS; CMS)	Depth at Curb (IN; MM)	Allowable Ponding Depth d (FT; M)	Height of Curb Opening h (FT; M)	d/h	Depth at Inlet (IN; MM)	T SPREAD @ SAG (FT; M)	REMARKS
				0.030	0.90	0.027																													Ahead/Rt.
				0.010	0.35	0.0035																													Ahead/Rt.
							0.031	4	0.124	0																									Ahead/Rt.
											0.248	0.001												2.5			0.248		0.813	0.160	0.458	0.34934	2.813	3.388	Weir Flow
3-11	DI-3B	6.000	51+75.00	0.210	0.90	0.189																													
			30.000'RIGI	0.130	0.35	0.0455																													
							0.235	4	0.94	0	0.940	0.0109	0.0200	4.893	2.000	0.4087	0.0833	4.165	0.897	3.52	0.1466	0.1515	5.809	6.000	1.033	1.000	0.940	0.000	2.694						
3-13	DI-3B	4.000	52+69.00	0.070	0.90	0.063																													
			39.360'RIGI	0.010	0.35	0.0035																													
							0.067	4	0.268	0	0.268	0.0100	0.0045	1.765	2.000	1.1331	0.0833	18.511	1.000	3.89	0.1621	0.1666	3.157	4.000	1.267	1.000	0.268	0.000	1.764						
3-14	DI-3B	4.000	52+90.11	0.060	0.90	0.054																													
			51.100'RIGHT				0.054	4	0.216	0	0.216	0.0070	0.0228	1.740	2.000	1.1494	0.0833	3.6535	1.000	3.45	0.1438	0.1666	2.591	4.000	1.544	1.000	0.216	0.000	1.739						
3-16	DI-2B	6	12+25.00	0.250	0.90	0.225																													
			26.130'RIGI	0.020	0.35	0.007																													
							0.232	4	0.928	0	0.928	0.0033	0.0249	6.174	2.000	0.3239	0.0833	3.3454	0.780	3.40	0.1417	0.1355	4.319	2.500	1.389	1.000	0.928	0.000	3.246						
3-18	DI-3B	4.000	72+55.00	0.070	0.90	0.063																													
			46.370'RIGI	0.010	0.25	0.0025																													
							0.066	4	0.264	0	0.264	0.0130	0.0200	1.671	2.000	1.1969	0.0833	4.165	1.000	3.52	0.1466	0.1666	3.394	4.000	1.179	1.000	0.264	0.000	1.670						
3-2	DI-2B	4	71+65.36	0.230	0.90	0.207																													
			-26.700'LEF	0.030	0.35	0.0105																													
							0.218	4	0.872	0	0.872	0.0030	0.0344	5.145	2.000	0.3887	0.0833	2.4215	0.820	3.17	0.1322	0.1429	3.960	2.500	1.010	1.000	0.872	0.000	3.297						
3-3	DI-3C	10.000	71+88.03	0.030	0.90	0.027																													Back/Lt.
			-30.780'LEFT				0.027	4	0.108	0		0.001	0.0305	1.932	2.000	1.0352	0.0833	2.7311		3.27															Back/Lt.
				0.020	0.90	0.018																													Ahead/Rt.
							0.018	4	0.072	0																									Ahead/Rt.
											0.180	0.001												10			0.180		0.385	0.244	0.458	0.53275	2.385	1.051	Weir Flow
3-4	DI-3B	12.000	72+17.01	0.890	0.90	0.801																													
			-32.860'LEF	0.060	0.35	0.021																													
							0.822	4	3.288	0	3.288	0.0130	0.0285	7.589	2.000	0.2635	0.0833	2.9228	0.663	3.32	0.1381	0.1201	11.911	12.000	1.007	1.000	3.288	0.000	3.910						
3-5	DI-2C	6.000	72+89.07	0.240	0.90	0.216																													Back/Lt.
			-64.640'LEF	0.040	0.35	0.014																													Back/Lt.
							0.23	4	0.92	0		0.001	0.0208	10.267	0.000	0	0.0208	1		2.00															Back/Lt.
							0	4	0	0																									Ahead/Rt.
											0.920	0.001			2.000									6			0.920		2.107	0.166	0.458	0.36245	4.107	8.443	T > 8.0 ft
3-6	DI-3B	4.000	72+75.00	0.050	0.90	0.045																													
			-41.910'LEF	0.010	0.35	0.0035																													
							0.049	4	0.196	0	0.196	0.0100	0.0208	1.569	2.000	1.2747	0.0833	4.0048	1.000	3.50	0.1458	0.1666	2.768	4.000	1.445	1.000	0.196	0.000	1.569						
3-9	DI-3B	4.000	53+25.00	0.050	0.90	0.045																													

INLETSOFT BY ENSOFTEC DATE: 5/27/2022

FORM LD 204 **STORMWATER INLET COMPUTATIONS** SHEET 3 OF 3

ROUTE CENTREVILLE ROAD - ROUTE 28 **PROJECT** SUDLEY ROAD/CENTREVILLE ROAD ROUNDABOUT **DESIGNER:** MJD **CHECKED:** TIS **DATE** 5/27/2022 **UNITS** ENGLISH

INLET																														Sag Inlets Only					
NUMBER	TYPE	LENGTH (FT; M)	STATION	DRAINAGE AREA (AC; HA)	C	CA	ΣCA	I (IN/HR; mm/HR)	Q INCR. (CFS; CMS)	Qc CARRYOVER (CFS; CMS)	QT GUTTER FLOW (CFS; CMS)	S GUTTER SLOPE (FT/FT; M/M)	Sx CROSS SLOPE (FT/FT; M/M)	T (SPREAD) (FT; M)	W (GUTTER WIDTH) (FT; M)	W/T	Sw (GUTTER SLOPE) (FT/FT; M/M)	Sw/Sx	Eo (App. 9C-8)	a	S'w	Se	COMPUTED LENGTH L_T (FT; M)	L, SPECIFIED LENGTH (FT; M)	L/LT	E (App. 9C-18)	Q INTERCEPTED (CFS; CMS) or d/h	Qb CARRYOVER (CFS; CMS)	Depth at Curb (IN; MM)	Allowable Ponding Depth d (FT; M)	Height of Curb Opening h (FT; M)	d/h	Depth at Inlet (IN; MM)	T SPREAD @ SAG (FT; M)	REMARKS
			72.830'RIGHT				0.045	4	0.18	0	0.180	0.0120	0.0243	1.469	2.000	1.3615	0.0833	3.428	1.000	3.42	0.1423	0.1666	2.821	4.000	1.418	1.000	0.180	0.000	1.469						

INLETSOFT BY ENSOFTEC DATE: 5/27/2022

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

INLET COMPUTATIONS

SHEET 7(1)

SCALE N/A

STORM SEWER & HGL COMPUTATIONS

LD-229
STORM SEWER DESIGN COMPUTATIONS

STORM FREQUENCY **10**

PROJECT: SUDLEY ROAD/CENTREVILLE ROAD ROUNDABOUT
LOCATION:
COUNTY: Manassas

Designed by: MJD
Checked by: TIS

UNITS **ENGLISH**

PIPE NO.	FROM POINT REFERENCE (1)	FROM POINT STA.	TO POINT REFERENCE (2)	TO POINT STA.	DRAIN. AREA "A" Acre (3)	RUNOFF COEFF. "C" (4)	CA INCRE-MENT (5)	CA ACCUM-ULATED (6)	INLET TIME Minutes (7)	RAIN FALL In/Hr (8)	RUNOFF Lateral CFS	RUNOFF Total Q CFS (9)	INVERT ELEVATIONS UPPER END (10)	INVERT ELEVATIONS LOWER END (11)	LENGTH of Pipe Ft. (12)	SLOPE Ft./Ft. (13)	SIZE (Dia. Or Span/Rise) In. (14)	SHAPE	Number of Pipes	Capacity CFS (15)	Friction Slope Ft./Ft.	NORMAL FLOW Depth of Flow, dn Ft.	NORMAL FLOW Area of Flow, An SqFt	NORMAL FLOW Hrn Ft.	NORMAL FLOW Vn Ft/Sec (16)	NORMAL FLOW En Ft.	FLOW TIME INCRE-MENT Minutes (17)	FLOW TIME ACCUMU-LATED Minutes (17)	REMARKS (18)
001-29	001		29		0.92	0.56	0.51	13.87	21.07	3.74	0.00	54.19	299.59	299.34	76.00	0.00329	42	Circular	1	57.71	0.00300	2.69	7.95	1.06	6.82	3.42	0.19	21.25	
002-001	002		001		0.00		0.00	13.35	20.69	3.77	0.00	52.27	299.99	299.59	144.00	0.00278	42	Circular	1	53.05	0.00280	2.82	8.32	1.07	6.29	3.44	0.38	21.07	
003-002	003	10+80.15	002		1.70	0.61	1.03	1.03	15.90	4.29	0.00	4.42	304.46	304.19	56.00	0.00482	15	Circular	1	4.49	0.00490	1.01	1.06	0.38	4.17	1.28	0.22	16.12	
005-002	005	11+58.95	002		0.29	0.85	0.25	12.32	20.44	3.80	0.00	48.39	300.21	299.99	89.00	0.00247	42	Circular	1	50.00	0.00240	2.77	8.17	1.06	5.92	3.32	0.25	20.69	
006-005	006		005	11+58.95	1.27	0.80	1.02	1.02	5.00	6.43	0.00	6.53	304.98	304.72	5.00	0.05200	15	Circular	1	14.73	0.01070	0.58	0.56	0.30	11.64	2.69	0.01	5.01	
012-3(1)	012		3-1	72+14.12	0.23	0.80	0.18	0.18	5.00	6.43	0.00	1.18	305.07	304.68	64.00	0.00609	15	Circular	1	5.04	0.00040	0.41	0.35	0.23	3.36	0.59	0.32	5.32	
013-3(1)	013		3-1	72+14.12	0.34	0.80	0.27	0.27	5.00	6.43	0.00	1.75	305.20	304.68	87.00	0.00598	15	Circular	1	5.00	0.00080	0.51	0.47	0.27	3.71	0.72	0.39	5.39	
015-3(2)	015	70+93.86	3-2	71+65.36	0.78	0.80	0.62	0.62	5.00	6.43	0.00	4.01	305.05	304.50	87.00	0.00632	15	Circular	1	5.14	0.00400	0.83	0.87	0.36	4.63	1.16	0.31	5.31	
019-3(12)	019		3-12		0.21	0.80	0.17	0.17	5.00	6.43	0.00	1.08	308.26	305.04	59.00	0.05458	15	Circular	1	15.09	0.00030	0.23	0.15	0.14	7.13	1.02	0.14	5.14	
020-3(12)	020		3-12		2.61	0.50	1.30	1.30	18.30	4.01	0.00	5.21	306.72	305.26	306.00	0.00477	18	Circular	1	7.26	0.00260	0.94	1.17	0.43	4.47	1.25	1.14	19.44	
022-3(14)	022		3-14	52+90.11	2.77	0.73	2.01	2.01	5.00	6.43	0.00	12.91	302.45	302.38	18.00	0.00389	24	Circular	1	14.11	0.00340	1.51	2.54	0.60	5.09	1.91	0.06	5.06	
030-3(8)	030	32+70.99	3-8	31+36.72	0.30	0.83	0.25	3.42	18.32	4.01	0.00	13.79	303.19	302.68	134.00	0.00381	24	Circular	1	13.96	0.00390	1.62	2.72	0.61	5.07	2.02	0.44	18.76	
031-030	031	33+35.88	030	32+70.99	0.13	0.78	0.10	3.17	18.14	4.03	0.00	12.79	303.56	303.22	63.00	0.00540	24	Circular	1	16.62	0.00330	1.32	2.19	0.58	5.84	1.85	0.18	18.32	
032-031	032	33+40.86	031	33+35.88	0.28	0.80	0.23	1.07	5.28	6.34	0.00	6.77	304.70	304.21	56.00	0.00875	15	Circular	1	6.04	0.01150	1.25	1.23	0.31	5.52	1.72	0.17	5.45	Pressure Flow
033-032	033	33+67.86	032	33+40.86	1.05	0.80	0.84	0.84	5.20	6.37	0.00	5.35	305.05	304.75	29.00	0.01034	15	Circular	1	6.57	0.00720	0.86	0.90	0.37	5.97	1.41	0.08	5.28	
036-031	036	34+03.99	031	33+35.88	2.51	0.80	2.01	2.01	18.00	4.05	0.00	8.12	304.81	303.63	68.00	0.01735	18	Circular	1	13.84	0.00620	0.83	1.00	0.40	8.14	1.86	0.14	18.14	
100-101	100		101		14.99	0.30	4.50	45.93	25.93	3.35	0.00	166.57	282.50	281.50	57.00	0.01754	48	Circular	1	190.24	0.01390	2.90	9.76	1.20	17.07	7.42	0.06	25.98	
101-102	101		102		0.10	0.30	0.03	45.96	25.98	3.34	0.00	166.67	281.50	281.00	18.00	0.02778	48	Circular	1	239.42	0.01390	2.46	8.10	1.12	20.59	9.04	0.02	26.00	
25-27	25		27		27.39	0.30	8.22	24.53	21.87	3.67	0.00	93.42	298.37	298.16	58.00	0.00362	48	Circular	1	86.43	0.00440	4.00	12.57	1.00	7.43	4.86	0.13	22.00	Pressure Flow
27-28	27		28		2.72	0.30	0.82	25.35	22.00	3.66	0.00	96.41	298.16	296.74	383.00	0.00371	48	Circular	1	87.49	0.00470	4.00	12.57	1.00	7.67	4.91	0.83	22.83	Pressure Flow
28-78	28		78		1.68	0.30	0.50	25.85	22.83	3.59	0.00	98.21	296.74	296.47	52.00	0.00519	48	Circular	1	103.48	0.00480	3.11	10.48	1.21	9.37	4.47	0.09	22.93	
29-25	29		25		5.16	0.47	2.44	16.31	21.25	3.72	0.00	63.29	298.84	298.37	222.00	0.00212	48	Circular	1	66.14	0.00200	3.13	10.56	1.22	5.99	3.69	0.62	21.87	
3(1)-3(4)	3-1	72+14.12	3-4	72+17.01	0.23	0.80	0.19	0.71	5.39	6.31	0.00	4.46	304.52	304.20	64.00	0.00500	15	Circular	1	4.57	0.00500	1.00	1.05	0.38	4.24	1.28	0.25	5.64	
3(10)-3(14	3-10	52+98.85	3-14	52+90.11	0.08	0.78	0.06	0.11	5.16	6.38	0.00	0.68	304.30	304.00	10.00	0.03000	15	Circular	1	11.19	0.00010	0.21	0.14	0.13	5.05	0.61	0.03	5.19	
3(11)-3(12	3-11	51+75.00	3-12		0.34	0.69	0.24	0.24	5.00	6.43	0.00	1.51	306.10	306.00	4.00	0.02500	15	Circular	1	10.21	0.00060	0.33	0.25	0.19	5.96	0.88	0.01	5.01	
3(12)-3(13	3-12		3-13	52+69.00	0.00		0.00	1.70	19.44	3.89	0.00	6.78	304.92	302.86	87.00	0.02368	18	Circular	1	16.16	0.00430	0.68	0.78	0.35	8.75	1.87	0.17	19.61	
3(13)-3(14	3-13	52+69.00	3-14	52+90.11	0.08	0.84	0.07	1.77	19.61	3.88	0.00	7.04	302.80	302.60	20.00	0.01000	24	Circular	1	22.62	0.00100	0.77	1.11	0.42	6.36	1.39	0.05	19.66	
3(14)-3(15	3-14	52+90.11	3-15		0.06	0.90	0.05	3.94	19.66	3.87	0.00	16.09	302.18	300.89	64.00	0.02016	24	Circular	1	32.12	0.00530	1.00	1.57	0.50	10.23	2.63	0.10	19.76	
3(15)-3(17	3-15	14+11.85	3-17		0.00		0.00	10.83	19.76	3.86	0.00	42.71	300.80	300.38	174.00	0.00241	42	Circular	1	49.39	0.00190	2.51	7.39	1.05	5.78	3.03	0.50	20.27	
3(16)-3(17	3-16	12+25.00	3-17		0.27	0.86	0.23	0.23	5.00	6.43	0.00	1.49	304.40	304.30	2.00	0.05000	15	Circular	1	14.45	0.00060	0.27	0.20	0.16	7.60	1.17	0.00	5.00	
3(17)-005	3-17		005	11+58.95	0.00		0.00	11.06	20.27	3.81	0.00	43.60	300.38	300.21	62.00	0.00274	42	Circular	1	52.66	0.00190	2.43	7.13	1.03	6.12	3.01	0.17	20.44	
3(18)-3(1)	3-18	72+55.00	3-1	72+14.12	0.08	0.83	0.07	0.07	5.00	6.43	0.00	0.42	305.00	304.55	43.00	0.01047	15	Circular	1	6.61	0.00000	0.21	0.14	0.13	3.03	0.36	0.24	5.24	
3(2)-3(3)	3-2	71+65.36	3-3	71+88.03	0.26	0.84	0.22	0.84	5.31	6.33	0.00	5.39	304.40	304.20	22.00	0.00909	15	Circular	1	6.16	0.00730	0.91	0.95	0.37	5.66	1.40	0.07	5.38	
3(3)-3(4)	3-3	71+88.03	3-4	72+17.01	0.05	0.90	0.05	0.89	5.38	6.31	0.00	5.67	304.10	303.80	28.00	0.01071	15	Circular	1	6.69	0.00810	0.88	0.93	0.37	6.11	1.47	0.08	5.45	
3(4)-3(6)	3-4	72+17.01	3-6	72+75.00	0.95	0.87	0.82	2.42	5.64	6.23	0.00	15.11	303.70	303.40	53.00	0.00566	24	Circular	1	17.02	0.00460	1.47	2.47	0.60	6.12	2.05	0.14	5.79	
3(5)-3(6)	3-5	72+89.07	3-6	72+75.00	0.28	0.82	0.23	0.23	5.00	6.43	0.00	1.48	304.30	304.10	21.00	0.00952	15	Circular	1	6.30	0.00050	0.41	0.35	0.23	4.20	0.69	0.08	5.08	
3(6)-3(7)	3-6	72+75.00	3-7	73+24.07	0.06	0.82	0.05	2.70	5.79	6.19	0.00	16.84	303.30	302.90	67.00	0.00597	24	Circular	1	17.48	0.00580	1.58	2.66	0.61	6.34	2.20	0.18	5.96	
3(7)-3(15)	3-7	73+24.07	3-15		0.00		0.00	2.70	5.96	6.14	0.00	16.84	301.60	301.25	32.00	0.01094	24	Circular	1	23.66	0.00580	1.25	2.06	0.57	8.18	2.29	0.07	6.03	
3(8)-3(15)	3-8	31+36.72	3-15	14+11.85	0.97	0.80	0.78	4.20	18.76	3.96	0.00	16.86	302.19	301.79	155.00	0.00258	30	Circular	1	20.83	0.00180	1.71	3.57	0.73	4.73	2.05	0.55	19.31	
3(9)-3(10)	3-9	53+25.00	3-10	52+98.85	0.05	0.90	0.05	0.05	5.00	6.43	0.00	0.29	304.90	304.40	30.00	0.01667	15	Circular	1	8.34	0.00000	0.16	0.09	0.10	3.18	0.32	0.16	5.16	
76-84	76		84		0.00		0.00	29.87	23.69	3.52	0.00	112.59	294.33	291.33	514.00	0.00584	48	Circular	1	109.77	0.00640	4.00	12.57	1.00	8.96	5.25	0.96	24.65	Pressure Flow
77-76	77		76		0.00		0.00	29.87	23.62	3.52	0.00	112.59	294.53	294.33	38.00	0.00526	48	Circular	1	104.18	0.00640	4.00	12.57	1.00	8.96	5.25	0.07	23.69	Pressure Flow
78-77	78		77		6.61	0.61	4.02	29.87	22.93	3.58	0.00	112.59	296.47	294.53	373.00	0.00520	48	Circular	1	103.58	0.00640	4.00	12.57	1.00	8.96	5.25	0.69	23.62	Pressure Flow
80-100	80		100		0.00		0.00	41.43	25.69	3.37	0.00	151.52	284.87	282.50	202.00	0.01173	48	Circular	1	155.57	0.01150	3.19	10.74	1.22	14.11	6.28	0.24	25.93	
81-80	81		80		38.55	0.30	11.57	41.43	25.67	3.37	0.00	151.52	285.24	284.87	22.00	0.01682	48	Circular	1	186.29	0.01150	2.74	9.17	1.18	16.52	6.98	0.02	25.69	
82-81	82		81		0.00		0.00	29.87	25.32	3.39	0.00	112.59	289.21	285.24	298.00	0.01332	48	Circular	1	165.78	0.00640	2.42	7.94	1.12	14.18	5.54	0.35	25.67	
83-82	83		82		0.00		0.00	29.87	24.73	3.44	0.00	112.59	291.07	289.21	316.00	0.00589	48	Circular	1	110.24	0.00640	4.00	12.57	1.00	8.96	5.25	0.59	25.32	Pressure Flow
84-83	84		83		0.00		0.00	29.87	24.65	3.44	0.00	112.59	291.33	291.07	44.00	0.00591	48	Circular	1	110.43	0.00640	4.00	12.57	1.00	8.96	5.25	0.08	24.73	Pressure Flow

LD-347
HYDRAULIC GRADE LINE ANALYSIS

PROJECT: SUDLEY ROAD/CENTREVILLE ROAD ROUNDABOUT

DESIGNED BY: MJD
Checked: TIS

INCIDENCE PROBABILITY 10 **Year**

INLET OR JUNCTION (1)	STA. (2)	INVERT EL. OUTFLOW PIPE	DEPTH OF FLOW OUTFLOW PIPE	OUTLET WATER SURFACE ELEV. (3)	DIA. PIPE Do (In/mm) (4)	DESIGN DISCH. Qo (CFS/CMS) (5)	LENGTH PIPE Lo (Ft/M) (6)	FRICTION SLOPE, Sfo (FT/FT) (M/M) (7)	FRICTION LOSS Hf (Ft/M) (8)	JUNCTION LOSS Vo (9)	JUNCTION LOSS Contr. Ho (Ft/M) (10)	JUNCTION LOSS Vi (11)	JUNCTION LOSS Vi*2/2g	JUNCTION LOSS Hi (Expn) 0.35*MAX. (Vi2/2g) (12)	JUNCTION LOSS SKEW Angle (13)	JUNCTION LOSS K	JUNCTION LOSS Bend H (Ft/M) (14)	JUNCTION LOSS Sum HL (Ft/M) (15)	SURFACE FLOW	Adj. Ht 1.3 Ht (Ft/M) (16)	Inlet Shaping? Y/N	0.5 Ht (Ft/M) (16)	FINAL H (Ft/M) (17)	Inlet Water Surface Elevation (18)	Top of MH Top of Inlet Elev. APPROX. (19)	Adjustment?
102																								0.000		
101		281.000	4.00	284.200	48	166.666	18.00	0.01407	0.253	20.589	1.646	17.069	4.524	1.583	0.0	0.00	0.000	3.229	0.100	3.229	YES	1.615	1.868	286.068	286.000	ADJUST
100		281.500	4.00	286.068	48	166.566	57.00	0.01406	0.801	17.069	1.131	14.108	3.091	1.082	45.0	0.46	1.415	3.628	0.000	3.628	YES	1.814	2.615	288.683	286.000	ADJUST
80		282.500	4.00	288.683	48	151.515	202.00	0.01163	2.349	14.108	0.773	16.519	4.237	1.483	0.0	0.00	0.000	2.256	0.000	2.256	YES	1.128	3.477	292.160	292.240	O.K.
81		284.870	4.00	292.160	48	151.515	22.00	0.01163	0.256	16.519	1.059	14.181	3.123	1.093	45.0	0.46	1.430	3.582	0.000	3.582	YES	1.791	2.047	294.207	292.240	ADJUST
82		285.240	4.00	294.207	48	112.587	298.00	0.00642	1.914	14.181	0.781	8.959	1.246	0.436	0.0	0.00	0.000	1.217	0.000	1.217	YES	0.608	2.522	296.729	302.210	O.K.
83		289.210	4.00	296.729	48	112.587	316.00	0.00642	2.029	8.959	0.312	8.959	1.246	0.436	45.0	0.46	0.571	1.318	0.000	1.318	YES	0.659	2.688	299.417	309.070	O.K.
84		291.070	4.00	299.417	48	112.587	44.00	0.00642	0.283	8.959	0.312	8.959	1.246	0.436	45.0	0.46	0.571	1.318	0.000	1.318	YES	0.659	0.942	300.359	309.330	O.K.
76		291.330	4.00	300.359	48	112.587	514.00	0.00642	3.301	8.959	0.312	8.959	1.246	0.436	45.0	0.46	0.571	1.318	0.000	1.318	YES	0.659	3.960	304.319	303.330	ADJUST
77		294.330	4.00	304.319	48	112.587	38.00	0.00642	0.244	8.959	0.312	8.959	1.246	0.436	45.0	0.46	0.571	1.318	0.000	1.318	YES	0.659	0.903	305.222	304.530	ADJUST
78		294.530	4.00	305.222	48	112.587	373.00	0.00642	2.395	8.959	0.312	9.370	1.363	0.477	45.0	0.46	0.624	1.413	0.000	1.413	YES	0.706	3.102	308.324	308.280	ADJUST
28		296.470	4.00	308.324	48	98.213	52.00	0.00489	0.254	9.370	0.341	7.672	0.914	0.320	45.0	0.46	0.418	1.079	0.000	1.079	YES	0.540	0.794	309.117	308.550	ADJUST
27		296.740	4.00	309.117	48	96.406	383.00	0.00471	1.803	7.672	0.228	7.434	0.858	0.300	0.0	0.00	0.000	0.529	0.000	0.529	YES	0.264	2.068	311.185	307.970	ADJUST
25		298.160	4.00	311.185	48	93.423	58.00	0.00442	0.256	7.434	0.215	5.992	0.558	0.195	90.0	0.70	0.390	0.800	30.132	1.040	YES	0.520	0.776	311.961	307.970	ADJUST
29		298.370	4.00	311.961	48	63.291	222.00	0.00203	0.451	5.992	0.139	6.819	0.722	0.253	11.0	0.14	0.101	0.493	0.000	0.493	YES	0.247	0.697	312.659	307.370	ADJUST
001		299.340	3.50	312.659	42	54.194	76.00	0.00303	0.231	6.819	0.181	6.285	0.613	0.215	9.0	0.12	0.072	0.467	1.924	0.467	YES	0.234	0.464	313.123	307.600	ADJUST
002		299.590	3.50	313.123	42	52.270	144.00	0.00282	0.406	6.285	0.153	5.921	0.544	0.191	0.0	0.00	0.000	0.344	0.000	0.344	YES	0.172	0.578	313.701	307.980	ADJUST
005	11+58.95	299.990	3.50	313.701	42	48.385	89.00	0.00242	0.215	5.921	0.136	6.118	0.581	0.203	90.0	0.70	1.473	1.813	0.930	1.813	YES	0.906	1.122	314.822	307.320	ADJUST
3-17		300.210	3.50	314.822	42	43.596	62.00	0.00196	0.122	6.118	0.145	5.778	0.518	0.181	0.0	0.00	0.000	0.327	0.000	0.327	YES	0.163	0.285	315.107	308.490	ADJUST
3-15	14+11.85	300.380	3.50	315.107	42	42.711	174.00	0.00188	0.328	5.778	0.130	10.229	1.625	0.569	90.0	0.70	1.137	1.836	0.000	1.836	YES	0.918	1.246	316.353	311.040	ADJUST
3-8	31+36.72	301.790	2.50	316.353	30	16.861	155.00	0.00177	0.274	4.725	0.087	5.067	0.399	0.140	21.0	0.25	0.099	0.325	0.000	0.325	YES	0.163	0.436	316.789	309.100	ADJUST
030	32+70.99	302.680	2.00	316.789	24	13.785	134.00	0.00388	0.520	5.067	0.100	5.837	0.529	0.185	22.0	0.26	0.137	0.421	0.994	0.421	YES	0.211	0.731	317.520	307.710	ADJUST
031	33+35.88	303.220	2.00	317.520	24	12.791	63.00	0.00334	0.211	5.837	0.132	8.142	1.029	0.360	90.0	0.70	0.331	0.824	0.407	0.824	YES	0.412	0.622	318.142	307.390	ADJUST
032	33+40.86	304.210	1.25	318.142	15	6.774	56.00	0.01150	0.644	5.520	0.118	5.965	0.553	0.193	54.0	0.52	0.287	0.598	1.427	0.778	YES	0.389	1.033	319.175	307.690	ADJUST
033	33+67.86	304.750	1.25	319.175	15	5.347	29.00	0.00716	0.208	5.965	0.138	0.000	0.000	0.000	0.0	0.00	0.000	0.138	5.347	0.180	YES	0.090	0.297	319.473	307.840	ADJUST
003	10+80.15	304.190	1.25	313.701	15	4.416	56.00	0.00489	0.274	4.167	0.067	0.000	0.000	0.000	0.0	0.00	0.000	0.067	4.416	0.088	YES	0.044	0.317	314.018	307.190	ADJUST
006		304.720	1.25	314.822	15	6.530	5.00	0.01068	0.053	11.642	0.526	0.000	0.000	0.000	0.0	0.00	0.000	0.526	6.530	0.684	YES	0.342	0.395	315.218	307.250	ADJUST
3-16	12+25.00	304.300	1.25	315.107	15	1.491	2.00	0.00056	0.001	7.597	0.224	0.000	0.000	0.000	0.0	0.00	0.000	0.224	1.491	0.291	YES	0.146	0.147	315.254	308.050	ADJUST
3-7	73+24.07	301.250	2.00	316.353	24	16.840	32.00	0.00579	0.185	8.178	0.260	6.337	0.624	0.218	28.0	0.32	0.197	0.675	0.000	0.675	YES	0.338	0.523	316.876	310.320	ADJUST
3-6	72+75.00	302.900	2.00	316.876	24	16.840	67.00	0.00579	0.388	6.337	0.156	6.120	0.582	0.204	55.0	0.52	0.305	0.665	0.303	0.665	YES	0.332	0.720	317.596	308.250	ADJUST

LD-347
HYDRAULIC GRADE LINE ANALYSIS

PROJECT: SUDLEY ROAD/CENTREVILLE ROAD ROUNDABOUT

DESIGNED BY: MJD
Checked: TIS

INCIDENCE PROBABILITY 10 **Year**

INLET OR JUNCTION (1)	STA. (2)	INVERT EL. OUTFLOW PIPE	DEPTH OF FLOW OUTFLOW PIPE	OUTLET WATER SURFACE ELEV. (3)	DIA. PIPE Do (In/mm) (4)	DESIGN DISCH. Qo (CFS/CMS) (5)	LENGTH PIPE Lo (Ft/M) (6)	FRICTION SLOPE, Sfo (FT/FT) (M/M) (7)	FRICTION LOSS Hf (Ft/M) (8)	JUNCTION LOSS Vo (9)	JUNCTION LOSS Contr. Ho (Ft/M) (10)	JUNCTION LOSS Vi (11)	JUNCTION LOSS Vi*2/2g	JUNCTION LOSS Hi (Expn) 0.35*MAX. (Vi2/2g) (12)	JUNCTION LOSS SKEW Angle (13)	JUNCTION LOSS K	JUNCTION LOSS Bend H (Ft/M) (14)	JUNCTION LOSS Sum HL (Ft/M) (15)	SURFACE FLOW	Adj. Ht 1.3 Ht (Ft/M) (16)	Inlet Shaping? Y/N	0.5 Ht (Ft/M) (16)	FINAL H (Ft/M) (17)	Inlet Water Surface Elevation (18)	Top of MH Top of Inlet Elev. APPROX. (19)	Adjustment?
3-4	72+17.01	303.400	2.00	317.596	24	15.113	53.00	0.00467	0.247	6.120	0.145	6.114	0.580	0.203	75.0	0.62	0.174	0.523	5.124	0.679	YES	0.340	0.587	318.183	307.170	ADJUST
3-3	71+88.03	303.800	1.25	318.183	15	5.674	28.00	0.00807	0.226	6.114	0.145	5.659	0.497	0.174	7.0	0.09	0.047	0.366	0.284	0.366	YES	0.183	0.409	318.592	307.030	ADJUST
3-2	71+65.36	304.200	1.25	318.592	15	5.390	22.00	0.00728	0.160	5.659	0.124	4.629	0.333	0.116	25.0	0.29	0.096	0.337	1.380	0.437	YES	0.219	0.379	318.971	307.300	ADJUST
015	70+93.86	304.500	1.25	318.971	15	4.010	87.00	0.00403	0.350	4.629	0.083	0.000	0.000	0.000	0.0	0.00	0.000	0.083	4.010	0.108	YES	0.054	0.405	319.375	308.430	ADJUST
3-14	52+90.11	300.890	2.00	316.353	24	16.090	64.00	0.00529	0.338	10.229	0.406	5.093	0.403	0.141	90.0	0.70	0.439	0.987	0.209	0.987	YES	0.493	0.832	317.185	308.400	ADJUST
3-13	52+69.00	302.600	2.00	317.185	24	7.039	20.00	0.00101	0.020	6.358	0.157	8.745	1.188	0.416	24.0	0.28	0.330	0.903	0.260	0.903	YES	0.451	0.472	317.656	308.560	ADJUST
3-12		302.860	1.50	317.656	18	6.779	87.00	0.00435	0.379	8.745	0.297	4.466	0.310	0.108	90.0	0.70	0.386	0.792	0.000	0.792	YES	0.396	0.775	318.431	310.020	ADJUST
019		305.040	1.25	318.431	15	1.080	59.00	0.00029	0.017	7.131	0.197	0.000	0.000	0.000	0.0	0.00	0.000	0.197	1.080	0.257	YES	0.128	0.146	318.576	310.960	ADJUST
036	34+03.99	303.630	1.50	318.142	18	8.122	68.00	0.00625	0.425	8.142	0.257	0.000	0.000	0.000	0.0	0.00	0.000	0.257	8.122	0.335	YES	0.167	0.592	318.735	307.270	ADJUST
3-5	72+89.07	304.100	1.25	317.596	15	1.478	21.00	0.00055	0.011	4.195	0.068	0.000	0.000	0.000	0.0	0.00	0.000	0.068	1.478	0.089	YES	0.044	0.056	317.652	307.890	ADJUST
3-1	72+14.12	304.200	1.25	318.183	15	4.459	64.00	0.00498	0.319	4.243	0.070	3.711	0.214	0.075	58.0	0.54	0.116	0.261	1.167	0.339	YES	0.169	0.488	318.672	307.130	ADJUST
012		304.680	1.25	318.672	15	1.183	64.00	0.00035	0.022	3.356	0.044	0.000	0.000	0.000	0.0	0.00	0.000	0.044	1.183	0.057	YES	0.028	0.051	318.722		ADJUST
3-10	52+98.85	304.000	1.25	317.185	15	0.684	10.00	0.00012	0.001	5.047	0.099	3.182	0.157	0.055	0.0	0.00	0.000	0.154	0.395	0.200	YES	0.100	0.101	317.286	308.380	ADJUST
3-9	53+25.00	304.400	1.25	317.286	15	0.289	30.00	0.00002	0.001	3.182	0.039	0.000	0.000	0.000	0.0	0.00	0.000	0.039	0.289	0.051	YES	0.026	0.026	317.312	308.570	ADJUST
022		302.380	2.00	317.185	24	12.912	18.00	0.00341	0.061	5.093	0.101	0.000	0.000	0.000	0.0	0.00	0.000	0.101	12.912	0.131	YES	0.065	0.127	317.311	308.430	ADJUST
020		305.260	1.50	318.431	18	5.210	306.00	0.00257	0.787	4.466	0.077	0.000	0.000	0.000	0.0	0.00	0.000	0.077	5.210	0.101	YES	0.050	0.837	319.268	312.920	ADJUST
3-11	51+75.00	306.000	1.25	318.431	15	1.510	4.00	0.00057	0.002	5.963	0.138	0.000	0.000	0.000	0.0	0.00	0.000	0.138	1.510	0.179	YES	0.090	0.092	318.523	309.770	ADJUST
013		304.680	1.25	318.672	15	1.748	87.00	0.00077	0.067	3.711	0.053	0.000	0.000	0.000	0.0	0.00	0.000	0.053	1.748	0.069	YES	0.035	0.101	318.773		ADJUST
3-18	72+55.00	304.550	1.25	318.672	15	0.424	43.00	0.00005	0.002	3.026	0.036	0.000	0.000	0.000	0.0	0.00	0.000	0.036	0.424	0.046	YES	0.023	0.025	318.697	307.640	ADJUST

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

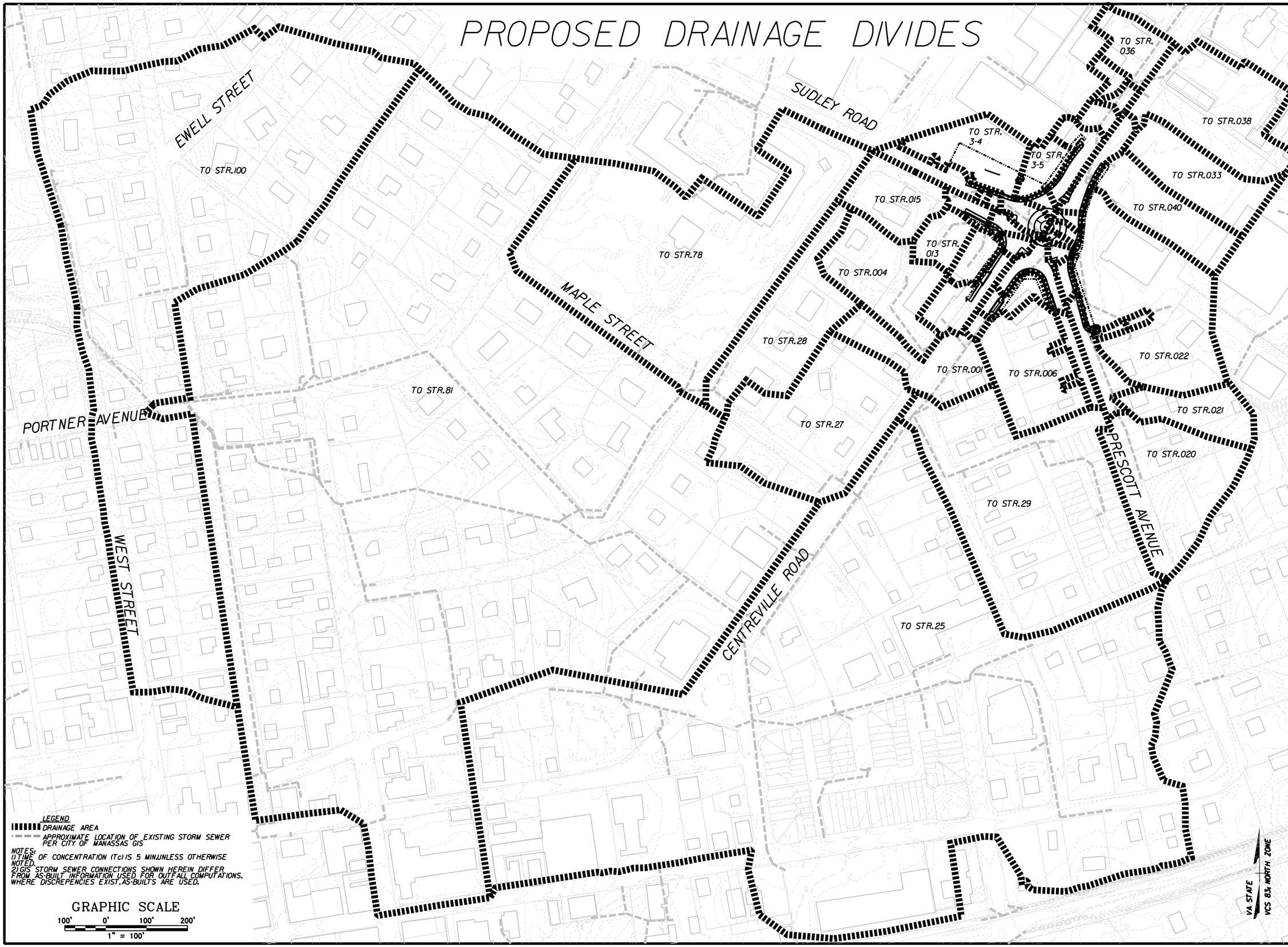
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

STORM SEWER & HGL COMPUTATIONS

SHEET 7(2)

SCALE N/A

PROPOSED DRAINAGE DIVIDES



LEGEND

DRAINAGE AREA

APPROXIMATE LOCATION OF EXISTING STORM SEWER PER CITY OF MANASSAS GIS

NOTES:
1) TIME OF CONCENTRATION (Tc) IS 5 MIN.UNLESS OTHERWISE NOTED.
2) GIS STORM SEWER CONNECTIONS SHOWN HEREIN DIFFER FROM AS-BUILT INFORMATION USED FOR OUTFALL COMPUTATIONS. WHERE DISCREPENCIES EXIST, AS-BUILTS ARE USED.

GRAPHIC SCALE

100' 0' 100' 200'

1" = 100'

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: MJD DATE:	05/27/22
DRAWN BY: MJD DATE:	05/27/22
CHECKED BY: TJS DATE:	05/27/22
APPROVED BY: DATE:	

PROPOSED DRAINAGE DIVIDES

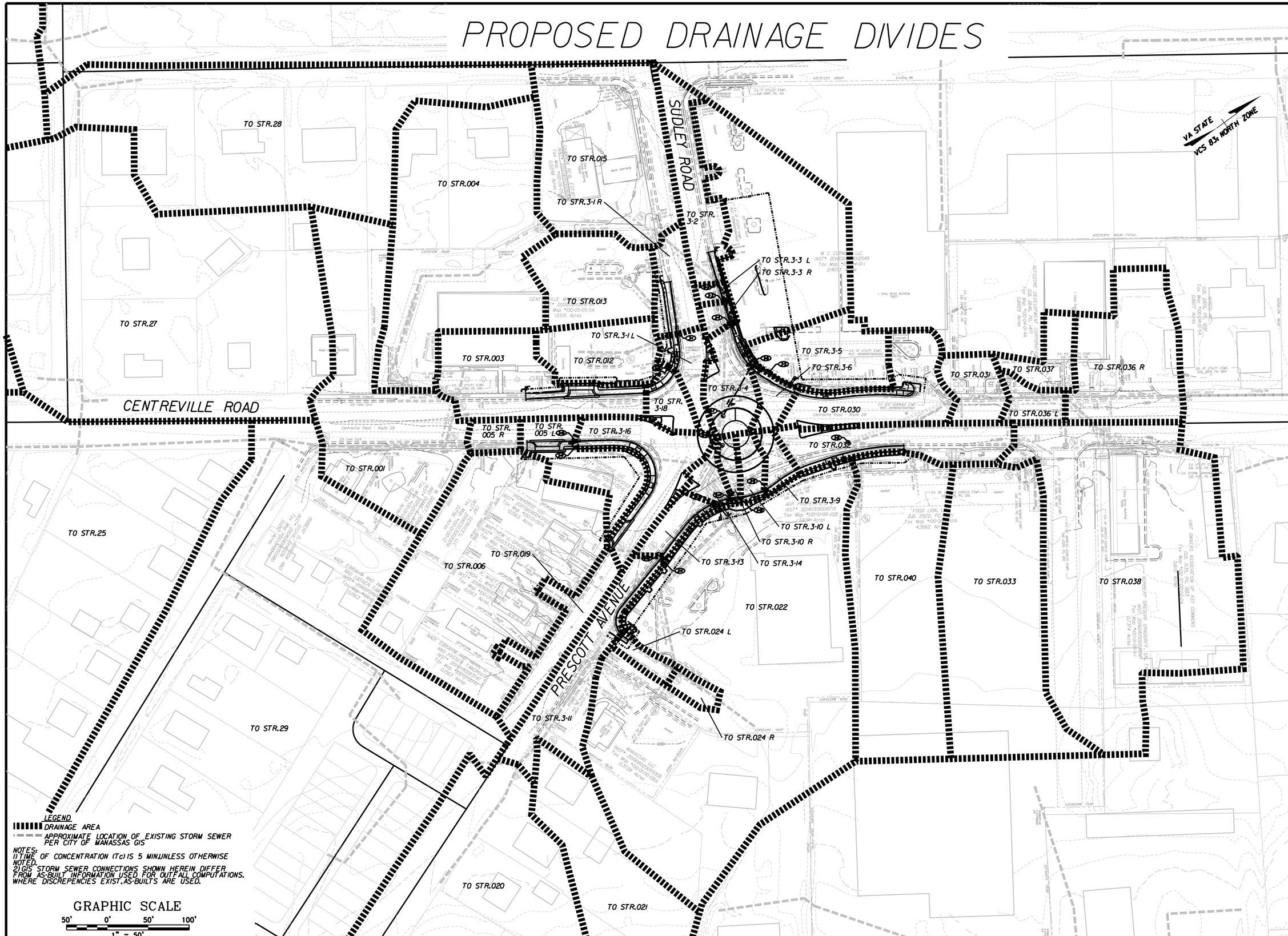
SHEET

7(3)

SCALE: 1"=100'

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

PROPOSED DRAINAGE DIVIDES



LEGEND

DRAINAGE AREA

APPROXIMATE LOCATION OF EXISTING STORM SEWER PER CITY OF MANASSAS GIS

NOTES:
1) TIME OF CONCENTRATION (Tc) IS 5 MIN UNLESS OTHERWISE NOTED.
2) GIS STORM SEWER CONNECTIONS SHOWN HEREIN DIFFER FROM AS-BUILT INFORMATION USED FOR OUTFALL COMPUTATIONS. WHERE DISCREPENCIES EXIST, AS-BUILTS ARE USED.

GRAPHIC SCALE

50' 0' 50' 100'

1" = 50'

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085	
DATE OF PLAN ISSUANCE:	TBD	
CONSULTANT PROJECT ID:	RK&K	
DESIGNED BY: MJD	DATE:	05/27/22
DRAWN BY: MJD	DATE:	05/27/22
CHECKED BY: TJS	DATE:	05/27/22
APPROVED BY:	DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

PROPOSED DRAINAGE DIVIDES

SHEET
7(4)

SCALE: 1"=50'

STORMWATER MANAGEMENT NARRATIVE AND COMPUTATIONS

STORMWATER MANAGEMENT:

SINCE THE FUNDING FOR THE PROJECT WAS ESTABLISHED AFTER JULY 1, 2012, THE PROJECT WILL CONFORM TO TECHNICAL CRITERIA FOR BOTH WATER QUALITY AND WATER QUANTITY LISTED IN DCSM ARTICLE 8.

WATER QUALITY:

1. THE VIRGINIA RUNOFF REDUCTION METHOD (VRRM) SPREADSHEET HAS BEEN USED TO CALCULATE THE WATER QUALITY REQUIREMENTS FOR THIS PROJECT, PER DCSM 8-510.2. THE PROJECTIS A LINEAR DEVELOPMENT THAT IS REQUIRED TO PROVIDE A PHOSPHORUS REDUCTION TO A LEVEL THAT IS 20% BELOW THE EXISTING PHOSPHORUS LOAD, PER DCSM 8-530.2.A.1.IV. AS ALLOWED UNDER DCSM 8-530.5.A.3, NUTRIENT CREDITS WILL BE PURCHASED TO SATISFY PHOSPHORUS REMOVAL REQUIREMENTS.

2. OUTFALLS 1A AND 1B FLOW TO MIDDLE BULL RUN (PL44). THE PROJECT HAS A TOTAL DISTURBED SITE AREA OF 1.19 ACRES. THE PRE-REDEVELOPMENT LAND COVER IS 0.41 ACRES OF MANAGED TURF AND 0.78 ACRES OF IMPERVIOUS COVER. THE POST-REDEVELOPMENT LAND COVER IS 0.34 ACRES OF MANAGED TURF AND 0.85 ACRES OF IMPERVIOUS COVER. THE PHOSPHORUS LOAD REDUCTION REQUIRED IS 0.50 LB/YR, SEE TABLE 3; VRRM COMPUTATIONS AND WATER QUALITY EXHIBITS ARE IN THIS SECTION. TO MEET THE REMOVAL REQUIREMENTS NUTRIENT CREDITS WILL BE PURCHASED FOR THE PHOSPHORUS LOAD REDUCTION REQUIREMENT.

DEQ Virginia Runoff Reduction Method Re-Development Compliance Spreadsheet - Version 3.0

○ 2011 BMP Standards and Specifications ◉ 2013 Draft BMP Standards and Specifications

Project Name: SUDLEY ROAD/CENTREVILLE ROAD ROUNDABOUT
Date: 05/27/2022
Linear Development Project? Yes

CLEAR ALL

data input cells / constant values / calculation cells / final results

Site Information

Post-Development Project (Treatment Volume and Loads)

Enter Total Disturbed Area *(acres)* → 1.19

Maximum reduction required:	20%
The site's net increase in impervious cover (acres) is:	0.07
Post-Development TP Load Reduction for Site (lb/yr):	0.50

Check:
BMP Design Specifications List: 2013 Draft Stds & Specs
Linear project? No
Land cover areas entered correctly? ✓
Total disturbed area entered? ✓

Pre-ReDevelopment Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.41	0.41
Impervious Cover (acres)				0.78	0.78
					1.19

Post-Development Land Cover (acres)

	A Soils	B Soils	C Soils	D Soils	Totals
Forest/Open Space (acres) -- undisturbed, protected forest/open space or reforested land					0.00
Managed Turf (acres) -- disturbed, graded for yards or other turf to be mowed/managed				0.34	0.34
Impervious Cover (acres)				0.85	0.85
Area Check	OK.	OK.	OK.	OK.	1.19

Constants

Annual Rainfall (inches)	43
Target Rainfall Event (inches)	1.00
Total Phosphorus (TP) EMC (mg/L)	0.26
Total Nitrogen (TN) EMC (mg/L)	1.86
Target TP Load (lb/acre/yr)	0.41
Pj (unitless correction factor)	0.90

Runoff Coefficients (Rv)

	A Soils	B Soils	C Soils	D Soils
Forest/Open Space	0.02	0.03	0.04	0.05
Managed Turf	0.15	0.20	0.22	0.25
Impervious Cover	0.95	0.95	0.95	0.95

LAND COVER SUMMARY -- PRE-REDEVELOPMENT

Land Cover Summary-Pre

Pre-ReDevelopment	Listed	Adjusted[1]
Forest/Open Space Cover (acres)	0.00	0.00
Weighted Rv(forest)	0.00	0.00
% Forest	0%	0%
Managed Turf Cover (acres)	0.41	0.34
Weighted Rv(turf)	0.25	0.25
% Managed Turf	34%	30%
Impervious Cover (acres)	0.78	0.78
Rv(impervious)	0.95	0.95
% Impervious	66%	70%
Total Site Area (acres)	**1.19**	**1.12**
Site Rv	**0.71**	**0.74**

LAND COVER SUMMARY -- POST DEVELOPMENT

Land Cover Summary-Post (Final)

Post ReDev. & New Impervious	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.34
Weighted Rv (turf)	0.25
% Managed Turf	29%
Impervious Cover (acres)	0.85
Rv(impervious)	0.95
% Impervious	71%
Final Site Area (acres)	**1.19**
Final Post Dev Site Rv	**0.75**

Land Cover Summary-Post

Post-ReDevelopment	
Forest/Open Space Cover (acres)	0.00
Weighted Rv(forest)	0.00
% Forest	0%
Managed Turf Cover (acres)	0.34
Weighted Rv (turf)	0.25
% Managed Turf	30%
ReDev. Impervious Cover (acres)	0.78
Rv(impervious)	0.95
% Impervious	70%
Total ReDev. Site Area (acres)	**1.12**
ReDev Site Rv	**0.74**

Land Cover Summary-Post

Post-Development New Impervious	
New Impervious Cover (acres)	0.07
Rv(impervious)	0.95

Treatment Volume and Nutrient Load

	Listed	Adjusted
Pre-ReDevelopment Treatment Volume (acre-ft)	0.0703	0.0688
Pre-ReDevelopment Treatment Volume (cubic feet)	3,062	2,998
Pre-ReDevelopment TP Load (lb/yr)	**1.92**	**1.88**
Pre-ReDevelopment TP Load per acre (lb/acre/yr)	1.62	1.68
Baseline TP Load (lb/yr) (**0.41 lbs/acre/yr** applied to pre-redevelopment area excluding pervious land proposed for new impervious cover)		*0.46*

Treatment Volume and Nutrient Load

Final Post-Development Treatment Volume (acre-ft)	0.0744
Final Post-Development Treatment Volume (cubic feet)	3,240
Final Post-Development TP Load (lb/yr)	**2.04**
Final Post-Development TP Load per acre **(lb/acre/yr)**	1.71

Post-ReDevelopment Treatment Volume (acre-ft)	0.0688
Post-ReDevelopment Treatment Volume (cubic feet)	2,998
Post-ReDevelopment Load (TP) (lb/yr)*	**1.88**
Post-ReDevelopment TP Load per acre **(lb/acre/yr)**	1.68
Max. Reduction Required (Below Pre-ReDevelopment Load)	**20%**
TP Load Reduction Required for Redeveloped Area (lb/yr)	**0.38**

Post-Development Treatment Volume (acre-ft)	0.0055
Post-Development Treatment Volume (cubic feet)	241
Post-Development TP Load (lb/yr)	**0.15**
TP Load Reduction Required for New Impervious Area (lb/yr)	**0.12**

[1] Adjusted Land Cover Summary:
Pre ReDevelopment land cover minus pervious land cover (forest/open space or managed turf) acreage proposed for new impervious cover.

Adjusted total acreage is consistent with Post-ReDevelopment acreage (minus acreage of new impervious cover).

Column I shows load reduction requriement for new impervious cover (based on new development load limit, 0.41 lbs/acre/year).

Post-Development Requirement for Site Area

TP Load Reduction Required (lb/yr)	**0.50**
Linear Project TP Load Reduction Required (lb/yr):	0.50

Nitrogen Loads (Informational Purposes Only)

Pre-ReDevelopment TN Load (lb/yr)	13.76
Final Post-Development TN Load (Post-ReDevelopment & New Impervious) (lb/yr)	14.56

WATER QUANTITY:

1. PROJECT OUTFALLS HAVE BEEN REVIEWED TO ENSURE THE PROPOSED IMPROVEMENTS DO NOT NEGATIVELY IMPACT THE EXISTING DOWNSTREAM RECEIVING CHANNELS. CHANNEL PROTECTION FOR MANMADE CONVEYANCE SYSTEMS INCLUDING DITCHES, CULVERTS, AND STORMDRAINS HAVE BEEN SATISFIED THROUGH DCSM 8-530.4.B.1.I. THE MANMADE STORMWATER CONVEYANCE SYSTEMS CONVEY THE PEAK FLOW RATE OF THE TWO-YEAR 24-HOUR STORM EVENT WITHOUT CAUSING EROSION OF THE SYSTEM. THE LIMITS OF ANALYSIS FOR VERIFYING CHANNEL PROTECTION DOWNSTREAM OF EACH OUTFALL HAS BEEN IDENTIFIED BASED ON LAND AREA, TO A POINT WHERE THE SITE'S CONTRIBUTING DRAINAGE AREA IS LESS THAN OR EQUAL TO 1.0% OF THE TOTAL WATERSHED AREA PER DCSM 8-530.4.B.3.I.

2. THE EXISTING STORMWATER CONVEYANCE SYSTEMS DOES CURRENTLY EXPERIENCE LOCALIZED FLOODING DURING THE 10-YEAR 24-HOUR STORM EVENT. CONSEQUENTLY, FLOOD PROTECTION HAS BEEN DEMONSTRATED BY SATISFYING DCSM 8-530.4.C.2.II., WHERE THE POST-DEVELOPMENT PEAK FLOW RATE FROM THE 10-YEAR 24-HOUR STORM EVENT IS CONTAINED WITHIN THE CONVEYANCE SYSTEMS. THE LIMITS OF ANALYSIS FOR VERIFYING FLOOD PROTECTION DOWNSTREAM OF EACH OUTFALL HAS BEEN IDENTIFIED BASED ON LAND AREA, TO A POINT WHERE THE SITE'S CONTRIBUTING DRAINAGE AREA IS LESS THAN OR EQUAL TO 1.0% OF THE TOTAL WATERSHED AREA PER DCSM 8-530-4.C.3.I.

3. OUTFALLS WITH INCREASED VOLUMES OF SHEET FLOW HAVE BEEN IDENTIFIED AND EVALUATED FOR POTENTIAL IMPACTS ON DOWN-GRADIENT PROPERTIES OR RESOURCES PER DCSM 8-530.4.E.

TWO OUTFALLS HAVE BEEN IDENTIFIED FOR THIS PROJECT. EACH OUTFALL HAS BEEN INDEPENDENTLY ANALYZED FOR ADEQUACY. A LIMITS OF ANALYSIS EXHIBIT SHOWING TIME OF CONCENTRATION (WHERE APPLICABLE), PROJECT AREA AND TOTAL DRAINAGE AREA FOR EACH OUTFALL IS LOCATED ON SHEET X. COMPUTATIONS FOR EACH OUTFALL ARE LOCATED ON SHEET X.

OUTFALL 1A:

OUTFALL 1A FLOWS INTO THE STORM DRAIN SYSTEM WHICH FLOWS SOUTHWEST ALONG CENTREVILLE ROAD. THE SYSTEM CONTINUES NORTHWEST UNTIL OUTFALLING INTO AN EXISTING MANMADE CHANNEL WHERE IS REACHES THE LIMITS OF ANALYSIS. PLANS FOR THE ORIGINAL ROADWAY IMPROVEMENTS ARE SHOWN IN APPENDIX A OF THE DRAINAGE REPORT.

THE DRAINAGE AREA AT THE LIMIT OF ANALYSIS IS 116.40 ACRES. THE CONTRIBUTING CONCENTRATED SITE AREAS IS 1.07 ACRES OR 0.92% OF THE TOTAL DRAINAGE AREA. THE STORM SEWER SYSTEM SHOWS THE HGL HIGHER THAN THE RIM FOR A LONG STRETCH WITHOUT ANY SEVERE PRESSURE FLOW OR JUNCTION LOSSES. THE POPPING HGL IS DUE TO HOW FLAT THE SYSTEM WAS ORIGINALLY CONSTRUCTED AND LIKELY NOT HAVING AN HGL COMPUTATION FOR THE ORIGINAL DESIGN (CIRCA 1969). UPGRADES TO THE PIPES WITHIN THE SITE AREA WILL NOT REDUCE THE HGL BELOW THE RIMS, FURTHER NO KNOWN FLOODING ISSUES HAVE BEEN REPORTED IN THE AREA. IN THE PROPOSEDCONDITION, THE SYSTEM WILL CONTINUE TO PERFORM AS IT CURRENTLY DOES. FLOOD PROTECTION WAS DEMONSTRATED BY SHOWING NO INCREASE IN THE 10-YEAR STORM FLOW. IT IS THE OPINION OF THE ENGINEER THAT THIS OUTFALL HAS ADEQUATE CHANNEL AND FLOOD PROTECTION FOR THE PROJECT RUNOFF.

OUTFALL 1B:

OUTFALL 1B SHEET FLOWS INTO AN EXISTING CURB AND GUTTER WHERE IT OUTFALLS TO THE STORM SEWER SYSTEM WHICH CONVERGES WITH OUTFALL 1A. FOR THIS OUTFALL THERE IS NO ADVERSE IMPACT TO ADJACENT PROPERTIES AS DEMONSTRATED BY THE INLET COMPUTATIONS. IT IS THE OPINION OF THE ENGINEER THAT THIS OUTFALL HAS ADEQUATE CHANNEL AND FLOOD PROTECTION FOR THE PROJECT RUNOFF.

Water Quantity Summary

Outfall	Location	*Channel Protection*						*Flood Protection*							Outfall Adequacy	Remarks
		Allowable 2-yr (24-hr) Velocity	Peak 2-yr (24-hr) Velocity	Limit of Analysis				Allowable 10-yr (24-hr) Discharge	Peak 10-yr (24-hr) Discharge	Limit of Analysis						
				Contributing Area (ac)		1-yr (24-hr) Discharge (cfs)				Contributing Area (ac)		1-yr (24-hr) Discharge (cfs)		LOA @ Mapped Floodplain/ Flood Prone Area(1)		
		(fps)	(fps)	Site	@ LOA	@ Outfall	@ LOA	(cfs)	(cfs)	Site	@ LOA	@ Outfall	@ LOA	Yes/No	Yes/No	
1A	Str. 003	40.00	SEE NOTE 2	1.07	116.40	N/A	N/A	SEE NOTE 2		1.07	116.40	N/A	N/A	NO	YES	
1B	Sheet Flow	N/A	N/A	0.11	N/A	N/A	N/A	N/A	N/A	0.11	N/A	N/A	N/A	NO	YES	

(1) Flood Prone Area as defined by local ordinance.

(2) Peak velocity and discharge, as well as allowable discharge (capacity) for each pipe shown in Section V of Drainage & SWM Report

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

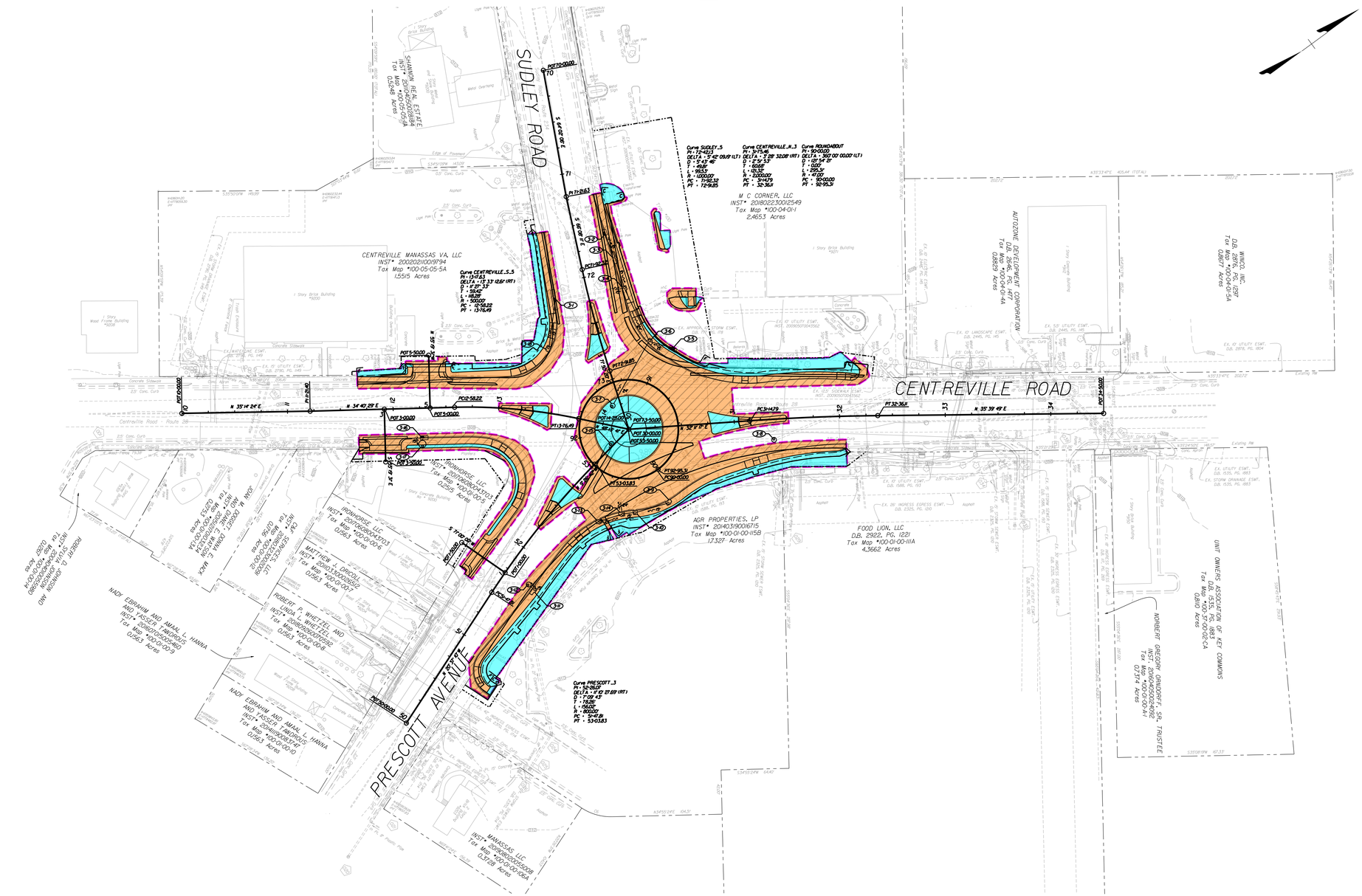
MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ___ DATE: ___

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

STORMWATER MANAGEMENT NARRATIVE AND COMPUTATIONS

SHEET
7(5)
SCALE N/A

WATER QUALITY MAP



LEGEND

- SITE AREA = 1.19 AC
- PRE-REDEVELOPMENT IMPERVIOUS= 0.78 AC
- PRE-REDEVELOPMENT MANAGED TURF = 0.41 AC
- PRE-REDEVELOPMENT OPEN SPACE = 0.00 AC
- POST-DEVELOPMENT IMPERVIOUS= 0.85 AC
- POST-DEVELOPMENT MANAGED TURF = 0.34 AC
- POST-DEVELOPMENT OPEN SPACE = 0.00 AC

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

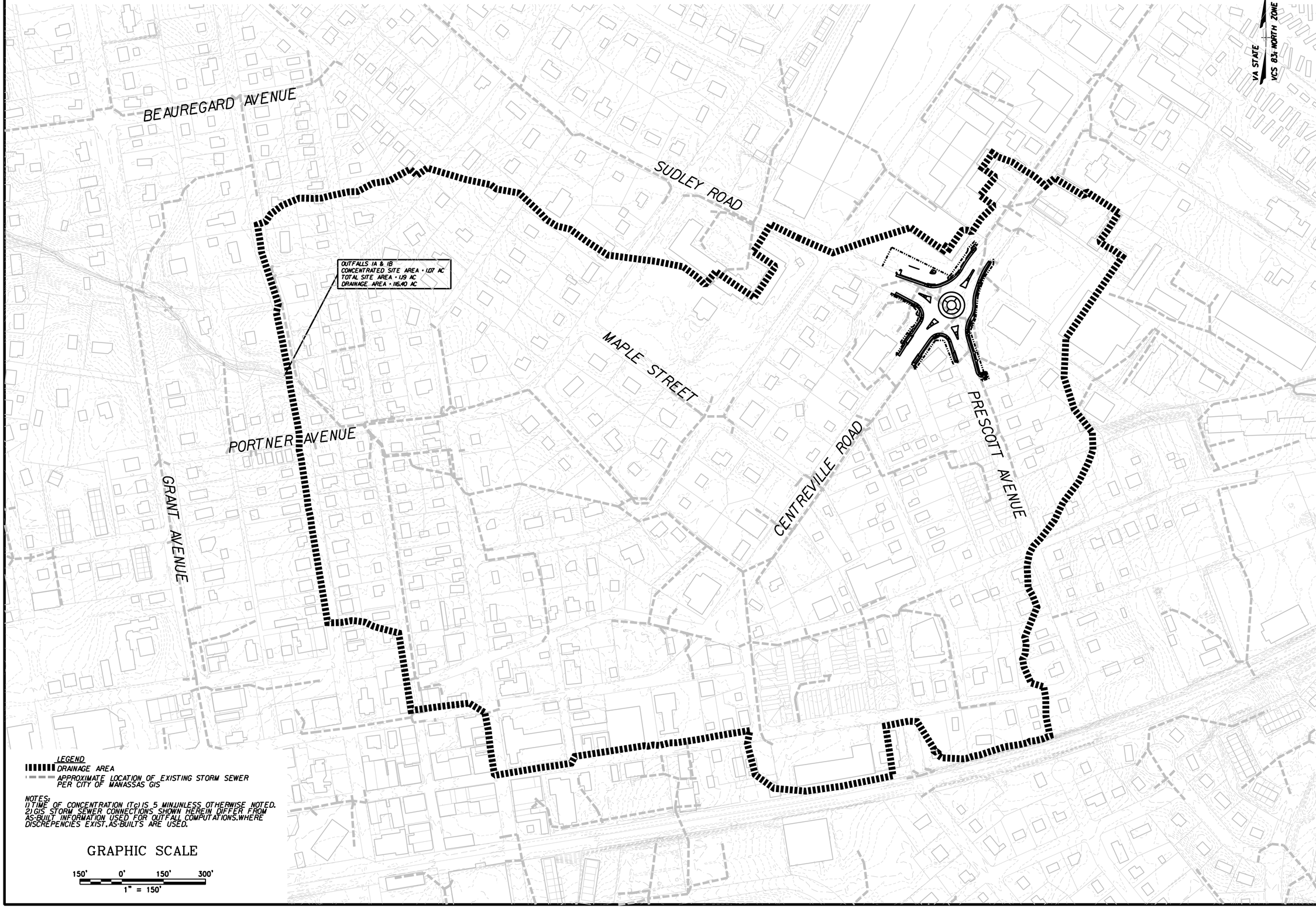
MANASSAS PROJECT NO:	T-085	
DATE OF PLAN ISSUANCE:	TBD	
CONSULTANT PROJECT ID:	RK&K	
DESIGNED BY: DVL	DATE:	05/27/22
DRAWN BY: DVL	DATE:	05/27/22
CHECKED BY: MJK	DATE:	05/27/22
APPROVED BY:	DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

WATER QUALITY MAP

SHEET
7(6)
SCALE 1"=50'

WATER QUANTITY MAP



60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085	
DATE OF PLAN ISSUANCE:	TBD	
CONSULTANT PROJECT ID:	RK&K	
DESIGNED BY: MJD	DATE:	05/27/22
DRAWN BY: MJD	DATE:	05/27/22
CHECKED BY: TJS	DATE:	05/27/22
APPROVED BY:	DATE:	

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

WATER QUANTITY MAP

SHEET
7(7)
SCALE: 1"=150'

SIGNING AND PAVEMENT MARKING PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

GENERAL NOTES

1. ALL PROPOSED SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH:
   - VDOT ROAD AND BRIDGE SPECIFICATIONS, DATED 2020
   - VDOT ROAD AND BRIDGE STANDARDS, DATED 2016, REVISED - DECEMBER 2021
   - WORK AREA PROTECTION MANUAL, DATED 2011, REVISION 2.1, NOVEMBER 1, 2020
   - MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), DATED 2009, WITH REVISIONS 1 AND 2, MAY 2012
   - VIRGINIA SUPPLEMENT TO THE 2009 MUTCD, DATED 2011, REVISION 1, SEPTEMBER 30, 2013
2. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL CONTACT "MISS UTILITY OF VIRGINIA" (1-800-522-7001) IN ORDER TO DETERMINE THE EXTENT AND LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. UTILITY COMPANIES SHALL BE NOTIFIED THROUGH "MISS UTILITY OF VIRGINIA" 48 HOURS IN ADVANCE OF ANY EXCAVATION WITHIN THE PROXIMITY OF THEIR UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT THEIR OWN EXPENSE, ANY EXISTING UTILITIES, PAVEMENT, CONCRETE ITEMS, PIPES, ETC. THAT ARE DAMAGED DURING CONSTRUCTION.
3. UNLESS OTHERWISE APPROVED BY THE ENGINEER OR INDICATED IN THE MAINTENANCE OF TRAFFIC AND SEQUENCE OF CONSTRUCTION PLANS, EXISTING TRAFFIC SIGNS WHICH ARE TO BE RELOCATED SHALL REMAIN IN PLACE UNTIL THE NEW SIGN STRUCTURE IS IN PLACE.
4. THE REMOVAL OR MODIFICATION OF EXISTING SIGN PANELS, STRUCTURES, OR FOUNDATIONS SHALL CONFORM TO SECTION 510 OF THE SPECIFICATIONS.
5. NEW MATERIALS AND ITEMS REQUIRED TO COMPLETE THE REMOVAL OR MODIFICATION OF EXISTING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH SECTION 105 OF THE SPECIFICATIONS.
6. ALL EXISTING AND PROPOSED SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. ALL PROPOSED SIGN LOCATIONS SHALL BE STAKED BY THE CONTRACTOR FOR REVIEW AND APPROVAL BY THE TRAFFIC ENGINEER PRIOR TO ANY INSTALLATION OR RELOCATION.
7. ALL SIGN PANELS, FRAMING MEMBERS, AND MISCELLANEOUS HARDWARE SHALL BE SALVAGED BY THE CONTRACTOR FOR THE DEPARTMENT AND DELIVERED INTACT TO VDOT NROIC LOCATED AT 8010 MASON KING CT. MANASSAS, VA. 20109
8. ALL STRIPING, WHERE MATCHING TO EXISTING, SHALL BE DONE IN A MANNER APPROVED BY THE ENGINEER.
9. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED MARKINGS SHOWN HEREIN SHALL BE ERADICATED.
10. LIMITS SHOWN OF PROPOSED PAVEMENT MARKINGS ARE APPROXIMATE AND SHALL BE MODIFIED IN THE FIELD TO ENSURE THAT PROPOSED PAVEMENT MARKINGS CONTINUE UNTIL EXISTING PAVEMENT MARKINGS CAN BE MATCHED.
11. PAVEMENT MARKING ARROWS, WORDS, AND SYMBOLS SHALL BE IN ACCORDANCE WITH STANDARD PM-10.
12. MEASUREMENT AND PAYMENT FOR SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH STANDARD VDOT BID ITEMS.

STANDARD SIGN LEGEND

PLAN ITEM	PLAN SYMBOL: PROPOSED	PLAN SYMBOL: EXISTING
Single Post Sign Support	●	○
Double Post Sign Support	●●	○○
Triple Post Sign Support	●●●	○○○

SIGN CALL-OUTS

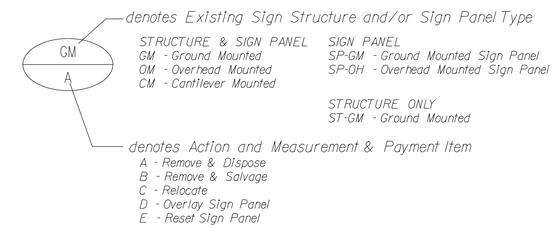
Existing sign and structure to be replaced in current location	INTERSTATE 95
Existing Sign to be Removed	INTERSTATE 95
Proposed Sign Panel	INTERSTATE 95

SIGN LABELS

Proposed Sign Assemblies

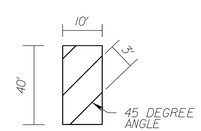
Relocated Sign Assemblies

Sign Relocation or Payable Sign Disposal/Salvage

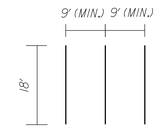


Signs noted on plans to be removed that do not have an accompanying sign label shall not be measured separately for payment. Removal and disposal for such signs shall be incidental to other contract items.

PARKING LOT CROSSWALK DETAIL

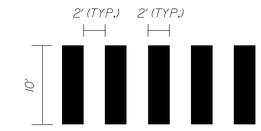


PARKING LOT SPOT MARKING DETAIL



YIELD LINE MARKING DETAIL

HIGH-VISIBILITY CROSSWALK MARKING DETAIL



60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

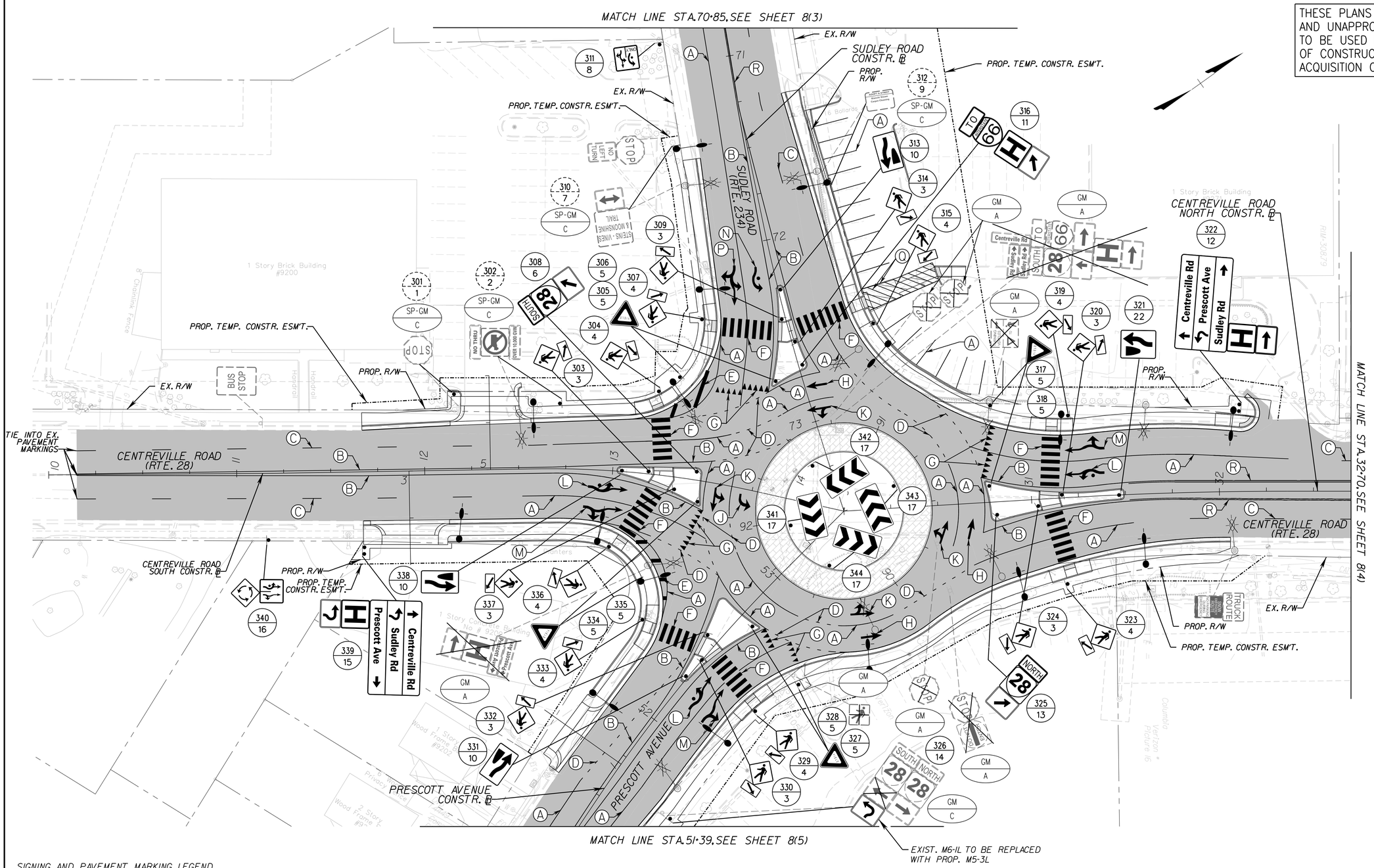
MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: RSB DATE: 05/27/22
DRAWN BY: PJH DATE: 05/27/22
CHECKED BY: ASM DATE: 05/27/22
APPROVED BY: SMS DATE: 05/27/22

SIGNING AND PAVEMENT MARKING PLAN
GENERAL NOTES, LEGENDS, & DETAILS

SHEET
8(1)

SIGNING AND PAVEMENT MARKING PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



SIGNING AND PAVEMENT MARKING LEGEND

- (A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH
- (B) TYPE B, CLASS I, YELLOW PAVEMENT LINE MARKING, 4" WIDTH
- (C) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH, 10' STRIPE, 30' SKIP
- (D) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 4" WIDTH, 2' STRIPE, 6' SKIP
- (E) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH
- (F) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 24" WIDTH (10' LONGITUDNAL CROSSING, 2' GAPS)
- (G) TYPE B, CLASS I, WHITE YIELD LINE, 24" WIDTH, 36" HEIGHT, 12" SPACING
- (H) TYPE B, CLASS I, PAVEMENT MARKING SYMBOL, THRU ARROW
- (J) TYPE B, CLASS I, PAVEMENT MARKING SYMBOL, LEFT TURN ARROW
- (K) TYPE B, CLASS I, PAVEMENT MARKING SYMBOL, THRU-LEFT ARROW
- (L) TYPE B, CLASS I, PAVEMENT MARKING SYMBOL, FISH HOOK THRU-LEFT ROUNDABOUT ARROW
- (M) TYPE B, CLASS I, PAVEMENT MARKING SYMBOL, FISH HOOK THRU-RIGHT ROUNDABOUT ARROW
- (N) TYPE B, CLASS I, PAVEMENT MARKING SYMBOL, FISH HOOK LEFT ROUNDABOUT ARROW
- (P) TYPE B, CLASS I, PAVEMENT MARKING SYMBOL, FISH HOOK THRU-LEFT-RIGHT ROUNDABOUT ARROW
- (Q) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 6" WIDTH
- (R) TYPE B, CLASS I, DOUBLE YELLOW PAVEMENT LINE MARKING, 4" WIDTH

NOTE: THE PAVEMENT MARKINGS FOR EXISTING COMMERCIAL PARKING STALLS ARE APPROXIMATELY SHOWN AND WERE NOT SURVEYED.

New sign and structure to be installed

Existing sign/Remove existing sign

GRAPHIC SCALE

25' 0' 25' 50'

1" = 25'

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB DATE:	05/27/22
DRAWN BY: PJH DATE:	05/27/22
CHECKED BY: ASM DATE:	05/27/22
APPROVED BY: SMS DATE:	05/27/22

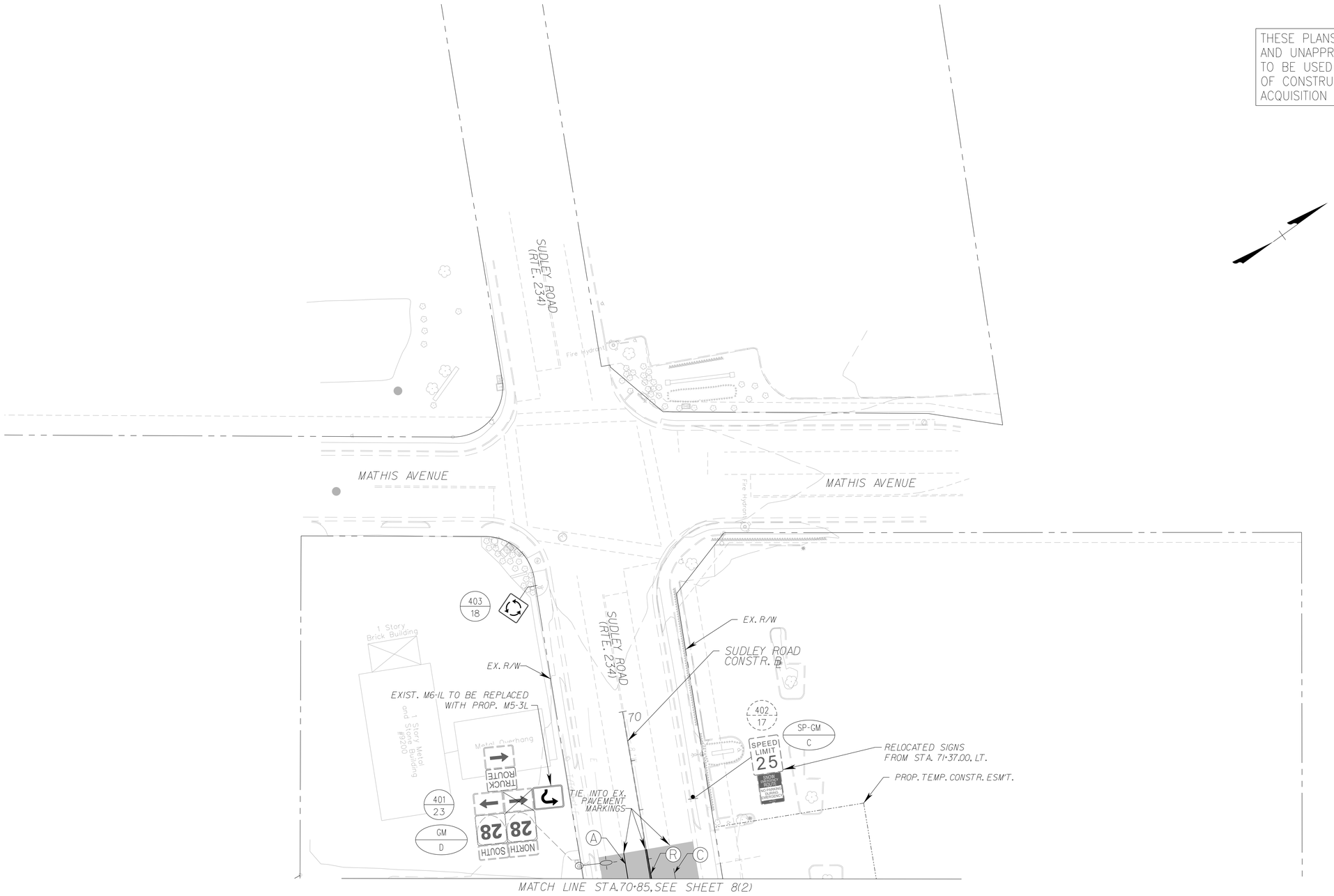
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

SIGNING AND PAVEMENT MARKING PLAN

SHEET 8(2)

SIGNING AND PAVEMENT MARKING PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



SIGNING AND PAVEMENT MARKING LEGEND

- (A) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH
- (B) TYPE B.CLASS I.YELLOW PAVEMENT LINE MARKING.4" WIDTH
- (C) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH. 10' STRIPE.30' SKIP
- (D) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH. 2' STRIPE.6' SKIP
- (E) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.24" WIDTH
- (F) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.24" WIDTH (10' LONGITUDNAL CROSSING.2' GAPS)
- (G) TYPE B.CLASS I.WHITE YIELD LINE.24" WIDTH.36" HEIGHT.12" SPACING
- (H) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.THRU ARROW
- (J) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.LEFT TURN ARROW
- (K) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.THRU-LEFT ARROW
- (L) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-LEFT ROUNDABOUT ARROW
- (M) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-RIGHT ROUNDABOUT ARROW
- (N) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK LEFT ROUNDABOUT ARROW
- (P) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-LEFT-RIGHT ROUNDABOUT ARROW
- (Q) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.6" WIDTH
- (R) TYPE B.CLASS I.DOUBLE YELLOW PAVEMENT LINE MARKING.4" WIDTH

NOTE: THE PAVEMENT MARKINGS FOR EXISTING COMMERCIAL PARKING STALLS ARE APPROXIMATELY SHOWN AND WERE NOT SURVEYED.

SPEED LIMIT 45 — New sign and structure to be installed

SPEED LIMIT 45 / SPEED LIMIT 45 — Existing sign/Remove existing sign

GRAPHIC SCALE

25' 0' 25' 50'

1" = 25'

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB	DATE: 05/27/22
DRAWN BY: PJH	DATE: 05/27/22
CHECKED BY: ASM	DATE: 05/27/22
APPROVED BY: SMS	DATE: 05/27/22

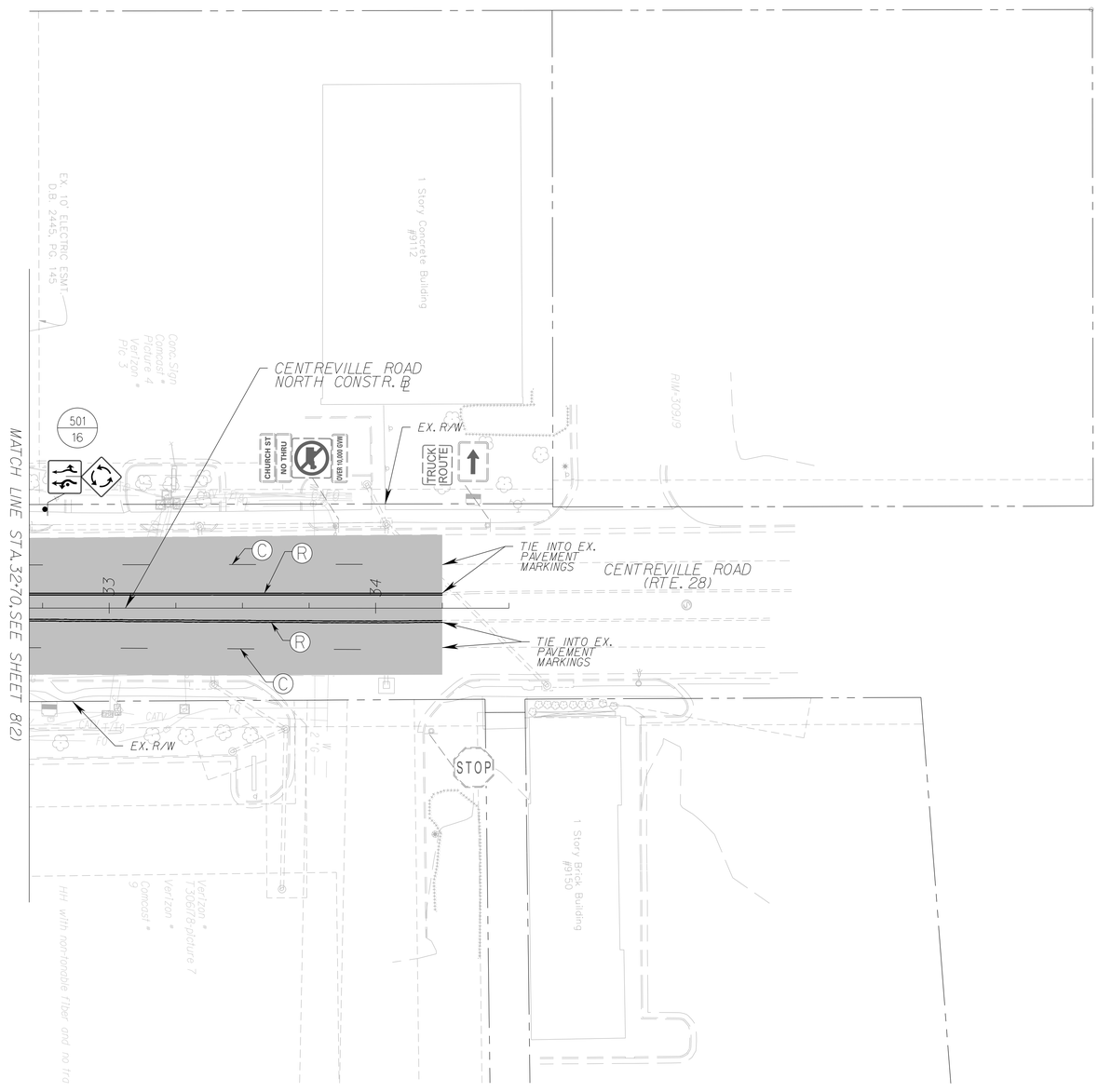
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

SIGNING AND PAVEMENT MARKING PLAN

SHEET
8(3)

SIGNING AND PAVEMENT MARKING PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



SIGNING AND PAVEMENT MARKING LEGEND

- (A) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH
- (B) TYPE B.CLASS I.YELLOW PAVEMENT LINE MARKING.4" WIDTH
- (C) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH. 10' STRIPE.30' SKIP
- (D) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH. 2' STRIPE.6' SKIP
- (E) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.24" WIDTH
- (F) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.24" WIDTH (10' LONGITUDNAL CROSSING.2' GAPS)
- (G) TYPE B.CLASS I.WHITE YIELD LINE.24" WIDTH.36" HEIGHT.12" SPACING
- (H) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.THRU ARROW
- (J) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.LEFT TURN ARROW
- (K) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.THRU-LEFT ARROW
- (L) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-LEFT ROUNDABOUT ARROW
- (M) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-RIGHT ROUNDABOUT ARROW
- (N) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK LEFT ROUNDABOUT ARROW
- (P) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-LEFT-RIGHT ROUNDABOUT ARROW
- (Q) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.6" WIDTH
- (R) TYPE B.CLASS I.DOUBLE YELLOW PAVEMENT LINE MARKING.4" WIDTH

NOTE: THE PAVEMENT MARKINGS FOR EXISTING COMMERCIAL PARKING STALLS ARE APPROXIMATELY SHOWN AND WERE NOT SURVEYED.

SPEED LIMIT 45 — New sign and structure to be installed

SPEED LIMIT 45 / SPEED LIMIT 45 — Existing sign/Remove existing sign

GRAPHIC SCALE

25' 0' 25' 50'

1" = 25'

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB DATE:	05/27/22
DRAWN BY: PJH DATE:	05/27/22
CHECKED BY: ASM DATE:	05/27/22
APPROVED BY: SMS DATE:	05/27/22

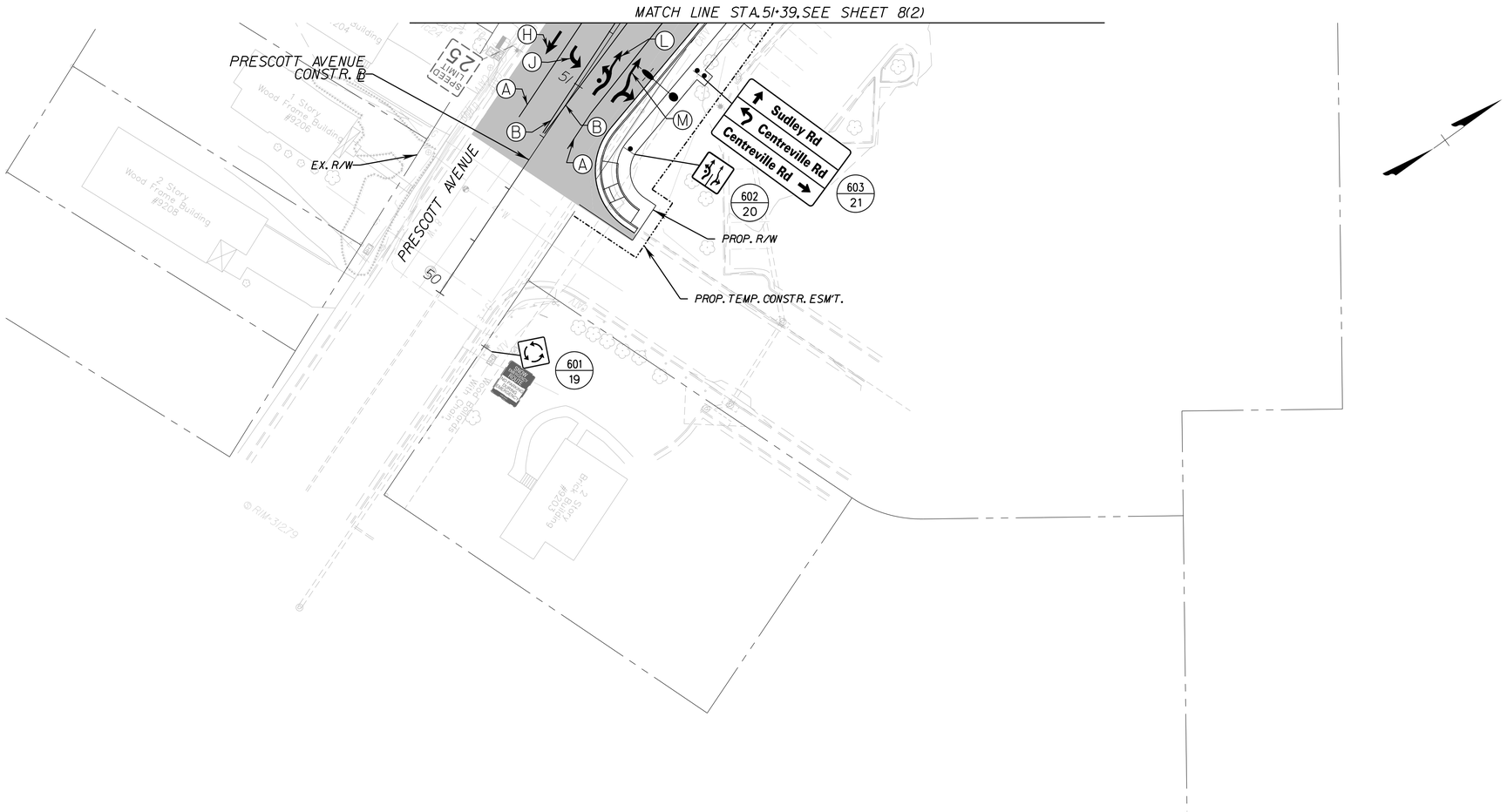
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

SIGNING AND PAVEMENT MARKING PLAN

SHEET
8(4)

SIGNING AND PAVEMENT MARKING PLANS

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.



SIGNING AND PAVEMENT MARKING LEGEND

- (A) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH
- (B) TYPE B.CLASS I.YELLOW PAVEMENT LINE MARKING.4" WIDTH
- (C) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH. 10' STRIPE.30' SKIP
- (D) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.4" WIDTH. 2' STRIPE.6' SKIP
- (E) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.24" WIDTH
- (F) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.24" WIDTH (10' LONGITUDNAL CROSSING.2' GAPS)
- (G) TYPE B.CLASS I.WHITE YIELD LINE.24" WIDTH.36" HEIGHT.12" SPACING
- (H) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.THRU ARROW
- (J) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.LEFT TURN ARROW
- (K) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.THRU-LEFT ARROW
- (L) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-LEFT ROUNDABOUT ARROW
- (M) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-RIGHT ROUNDABOUT ARROW
- (N) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK LEFT ROUNDABOUT ARROW
- (P) TYPE B.CLASS I.PAVEMENT MARKING SYMBOL.FISH HOOK THRU-LEFT-RIGHT ROUNDABOUT ARROW
- (Q) TYPE B.CLASS I.WHITE PAVEMENT LINE MARKING.6" WIDTH
- (R) TYPE B.CLASS I.DOUBLE YELLOW PAVEMENT LINE MARKING.4" WIDTH

NOTE: THE PAVEMENT MARKINGS FOR EXISTING COMMERCIAL PARKING STALLS ARE APPROXIMATELY SHOWN AND WERE NOT SURVEYED.

SPEED LIMIT 45 — New sign and structure to be installed

SPEED LIMIT 45 — Existing sign/Remove existing sign

GRAPHIC SCALE

25' 0' 25' 50'

1" = 25'

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB	DATE: 05/27/22
DRAWN BY: PJH	DATE: 05/27/22
CHECKED BY: ASM	DATE: 05/27/22
APPROVED BY: SMS	DATE: 05/27/22

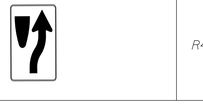
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

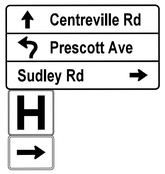
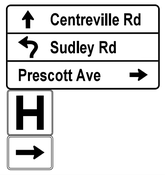
SIGNING AND PAVEMENT MARKING PLAN

SHEET

8(5)

SIGN SCHEDULE

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.): per ASSEMBLY	SIGN PANEL AREA (s.f.): ALL ASSEMBLIES	PROP. SIGN STRUCTURE ST'D.	PROP. FOUNDATION ST'D.	REMARKS
1	301		EXIST.	-	-	1	-	-	STP-1 2" 14 GA.	TYPE A	
2	302		EXIST.	-	-	1	-	-	STP-1 2.5" 12 GA.	TYPE A	
			EXIST.	-	-	1	-				
			EXIST.	-	-	1	-				
3	303,309,314,320, 324,330,332,337		W11-2	36"	36"	8	9	88	STP-1 2.5" 12 GA.	TYPE A	
			W16-7P(R)	24"	12"	8	2				
4	304,307,315,319, 323,329,333,336		W11-2	36"	36"	8	9	88	STP-1 2.5" 12 GA.	TYPE A	
			W16-7P(L)	24"	12"	8	2				
5	305,306,317,318, 327,328,334		R1-2	36"	36"	8	9	72	STP-1 2" 14 GA.	TYPE A	
	335										TO BE MOUNTED ON PROP. LIGHT POLE
6	308		M3-3	24"	12"	1	2	13.2	STP-1 2.5" 12 GA.	TYPE A	
			M1-V1A	36"	36"	1	9				
			M6-2R	21"	15"	1	2.19				
7	310		EXIST.	-	-	1	-	-	-	-	TO BE MOUNTED ON PROP. LIGHT POLE
			EXIST.	-	-	1	-				
8	311		R3-8	30"	30"	1	6.25	6.25	STP-1 2" 14 GA.	TYPE A	
9	312		EXIST.	-	-	1	-	-	-	-	TO BE MOUNTED ON PROP. LIGHT POLE
10	313,331,338		R4-7C	18"	30"	3	3.75	11.25	STP-1 2.5" 12 GA.	TYPE A	

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.): per ASSEMBLY	SIGN PANEL AREA (s.f.): ALL ASSEMBLIES	PROP. SIGN STRUCTURE ST'D.	PROP. FOUNDATION ST'D.	REMARKS
11	316		M4-5	24"	12"	1	2	12.2	STP-1 2.5" 12 GA.	TYPE A	
			M1-1	24"	24"	1	4				
			D9-2	24"	24"	1	4				
			M6-2R	21"	15"	1	2.19				
12	322		D1-3D	81"	42"	1	23.6	29.8	STP-1 2.5" 10 GA.	TYPE B	2-POST
			D9-2	24"	24"	1	4				
			M6-1R	21"	15"	1	2.19				
13	325		M3-3	24"	12"	1	2	13.2	STP-1 2.5" 12 GA.	TYPE A	
			M1-V1A	36"	36"	1	9				
			M6-2R	21"	15"	1	2.19				
14	326		M5-3L	21"	15"	1	2.19	2.2	STP-1 2.5" 10 GA.	TYPE B	2-POST REPLACE EXIST. M6-1L ON EXIST. SIX SIGN ASSEMBLY
15	339		D1-3D	81"	42"	1	23.6	29.8	STP-1 2.5" 10 GA.	TYPE B	2-POST
			D9-2	24"	24"	1	4				
			M6-1R	21"	15"	1	2.19				
16	340,501		R3-8	30"	30"	2	6.25	25	STP-1 2.5" 12 GA.	TYPE A	
			W2-6	30"	30"	2	6.25				
17	402		EXIST.	-	-	1	-	-	STP-1 2.5" 12 GA.	TYPE A	
			EXIST.	-	-	1	-				
18	403		W2-6	30"	30"	1	6.25	6.25	-	-	TO BE MOUNTED ON EXIST. LIGHT POLE
19	601		W2-6	30"	30"	1	6.25	6.25	-	-	TO BE MOUNTED ON EXIST. LIGHT POLE
			EXIST.	-	-	1	-				

NOTES:

1) ALL SIGNS SHALL BE ORIENTATED AS SHOWN ON THE PLANS.
2) SIGN COLOR COMBINATIONS SHALL BE IN ACCORDANCE WITH THE FHWA SHS BOOK AND THE 2011 VIRGINIA SHS BOOK OR AS NOTED IN THE PLANS.
3) ALL POSITIVE CONTRAST GUIDE AND SPECIFIC SERVICE SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-3 OR L-4 UNLESS OTHERWISE NOTED IN THE REMARKS. ALL OTHER SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-1 OR L-2 UNLESS OTHERWISE NOTED IN THE REMARKS.
4) ALL BLACK SHEETING SHALL BE NON-REFLECTIVE.
5) SIGN STRUCTURES SHALL BE INSTALLED PER THE NOTED SIGN ST'D.
6) ALL ST'D. STP-1 STRUCTURES TO BE SINGLE POST UNLESS OTHERWISE NOTED.
7) IF APPLICABLE, SEE SHEET 2D FOR NON-STANDARD TYPE VA AND VIA SIGN STRUCTURE DETAILS.

NOTE: THE PAVEMENT MARKINGS FOR EXISTING COMMERCIAL PARKING STALLS ARE APPROXIMATELY SHOWN AND WERE NOT SURVEYED.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

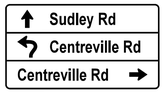
DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: RSB DATE: 05/27/22
DRAWN BY: PJH DATE: 05/27/22
CHECKED BY: ASM DATE: 05/27/22
APPROVED BY: SMS DATE: 05/27/22

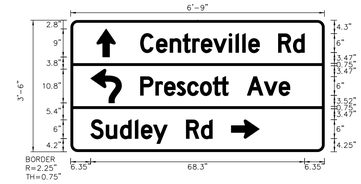
SIGNING AND PAVEMENT MARKING PLAN
SIGN SCHEDULE

SHEET
8(6)

SIGN SCHEDULE

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.): PER ASSEMBLY	ALL ASSEM-BLIES	PROP. SIGN STRUCTURE ST'D.	PROP. FOUNDATION ST'D.	REMARKS
20	602		R3-8	30"	30"	1	6.25	6.25	STP-1 2" 14 GA.	TYPE A	
21	603		D1-3D	81"	42"	1	23.6	23.6	STP-1 2.5" 10 GA.	TYPE B	2-POST
22	321		R4-7	24"	30"	1	5.0	5.0	STP-1 2" 14 GA.	TYPE A	
23	401		M5-3L	21"	15"	1	2.19	2.2	EXIST.	EXIST.	REPLACE EXIST. M6-1L ON EXIST. SIX SIGN ASSEMBLY

SIGN DETAIL
1:25



SIGN NUMBER	D1-3D
WIDTH x HGHT.	6'-9" x 3'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	0	8.3	30.3	6	9
AR_FISHOOK	0	6.4	15.6	9.9	10.8
AR_Type D	270	51.2	4.3	6	9

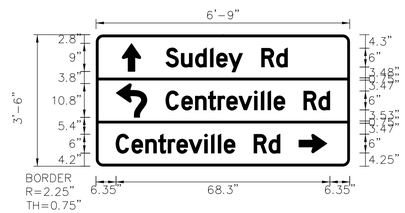
Panel Style: guide_con_destination_3-line_2022.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

																						LENGTH	SERIES/SIZE
C	e	n	t	r	e	v	i	l	l	e		R	d										D 2000
22.3	27.3	31.7	35.8	38.9	41.6	45.5	50.5	52.7	54.8	56.8	60.3	66.3	71									52.4	6/4.5
P	r	e	s	c	o	t	t		A	v	e												D 2000
22.3	27.1	29.9	33.9	37.3	41.3	45.4	47.9	50.3	56.3	61.7	66.5											47.8	6/4.5
S	u	d	l	e	y		R	d															D 2000
6.4	11.3	15.8	20.6	22.5	26.4	30.9	36.9	41.6														38.9	6/4.5

SIGN DETAIL
1:25



SIGN NUMBER	D1-3 (3 Dest - Arrows LLR)
WIDTH x HGHT.	6'-9" x 3'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	0	8.3	30.2	6	9
AR_FISHOOK	0	6.4	15.6	9.9	10.8
AR_Type D	270	64.7	4.3	6	9

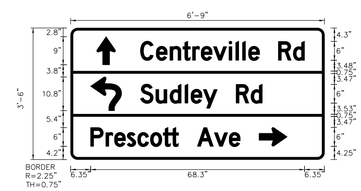
Panel Style: guide_con_destination_3-line_2022.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

																						LENGTH	SERIES/SIZE
S	u	d	l	e	y		R	d															D 2000
22.3	27.2	31.7	36.5	38.4	42.3	46.8	52.8	57.5														38.9	6/4.5
C	e	n	t	r	e	v	i	l	l	e		R	d										D 2000
22.3	27.3	31.7	35.8	38.9	41.6	45.5	50.5	52.7	54.8	56.8	60.3	66.3	71									52.4	6/4.5
C	e	n	t	r	e	v	i	l	l	e		R	d										D 2000
6.4	11.4	15.8	19.9	23	25.7	29.6	34.6	36.8	38.9	40.9	44.4	50.4	55.1									52.4	6/4.5

SIGN DETAIL
1:25



SIGN NUMBER	D1-3D
WIDTH x HGHT.	6'-9" x 3'-6"
BORDER WIDTH	0.75"
CORNER RADIUS	2.25"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White/White

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	0	8.3	30.2	6	9
AR_FISHOOK	0	6.4	15.6	9.9	10.8
AR_Type D	270	60.1	4.3	6	9

Panel Style: guide_con_destination_3-line_2022.ssi
Dimensions are in inches.tenths

Letter locations are panel edge to lower left corner

LETTER POSITIONS (X)

																						LENGTH	SERIES/SIZE
C	e	n	t	r	e	v	i	l	l	e		R	d										D 2000
22.3	27.3	31.7	35.8	38.9	41.6	45.5	50.5	52.7	54.8	56.8	60.3	66.3	71									52.4	6/4.5
S	u	d	l	e	y		R	d															D 2000
22.3	27.2	31.7	36.5	38.4	42.3	46.8	52.8	57.5														38.9	6/4.5
P	r	e	s	c	o	t	t		A	v	e												D 2000
6.4	11.2	14	18	21.4	25.4	29.5	32	34.4	40.4	45.8	50.6											47.8	6/4.5

NOTES:

1) ALL SIGNS SHALL BE ORIENTATED AS SHOWN ON THE PLANS.
2) SIGN COLOR COMBINATIONS SHALL BE IN ACCORDANCE WITH THE FHWA SHS BOOK AND THE 2011 VIRGINIA SHS BOOK OR AS NOTED IN THE PLANS.
3) ALL POSITIVE CONTRAST GUIDE AND SPECIFIC SERVICE SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-3 OR L-4 UNLESS OTHERWISE NOTED IN THE REMARKS. ALL OTHER SIGNS SHALL UTILIZE FABRICATION LETTER TYPE L-1 OR L-2 UNLESS OTHERWISE NOTED IN THE REMARKS.
4) ALL BLACK SHEETING SHALL BE NON-REFLECTIVE.
5) SIGN STRUCTURES SHALL BE INSTALLED PER THE NOTED SIGN ST'D.
6) ALL ST'D. STP-1 STRUCTURES TO BE SINGLE POST UNLESS OTHERWISE NOTED.
7) IF APPLICABLE, SEE SHEET 2D FOR NON-STANDARD TYPE VA AND VIA SIGN STRUCTURE DETAILS.

NOTE: THE PAVEMENT MARKINGS FOR EXISTING COMMERCIAL PARKING STALLS ARE APPROXIMATELY SHOWN AND WERE NOT SURVEYED.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB	DATE: 05/27/22
DRAWN BY: PJH	DATE: 05/27/22
CHECKED BY: ASM	DATE: 05/27/22
APPROVED BY: SMS	DATE: 05/27/22

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

SIGNING AND PAVEMENT MARKING PLAN
SIGN SCHEDULE

SHEET
8(7)

GENERAL NOTES

POLES:

1. ALL EXISTING LIGHT POLES AND LUMINAIRES ARE TO BE REMOVED UNLESS OTHERWISE NOTED.
2. LIGHT POLE BOLT CIRCLE AND ANCHOR BOLT DIAMETERS IN FOUNDATIONS SHALL BE SIZED PER CITY OF MANASSAS STD. TS-20.6
3. MOUNTING HEIGHTS SHOWN ON THE PLANS SHALL BE ADHERED TO WITHIN A TOLERANCE OF 1 FT., AND SHALL IN NO CASE BE LESS THAN THE MOUNTING HEIGHTS SHOWN. MOUNTING HEIGHT MUST BE MEASURED FROM LUMINAIRE TO SURFACE OF THE SAME ROADWAY THAT ITS BASELINE WAS USED TO DEFINE POLE LOCATION.
4. ALL NEW LIGHTING POLES THROUGHOUT THE PROJECT SHALL BE PROVIDED WITH NON-CORROSIVE, METALLIC IDENTIFICATION TAGS, SIZED AS REQUIRED. BEARING THE POLE OWNER: CITY OF MANASSAS, POLE NUMBER, LUMINAIRE SIZE, CIRCUIT NUMBER, LENGTH OF THE POLE, ARM LENGTH, AND THE SERVICE PANEL NUMBER. THE IDENTIFICATION TAGS SHALL BE APPROVED AS FOLLOWS:
   CITY OF MANASSAS
   [THREE DIGIT POLE #]-[LUMINAIRE SIZE]-[CIRCUIT NUMBER]
   [LENGTH OF POLE]-[ARM LENGTH]
   [SERVICE PANEL NUMBER]
5. ALL LIGHTING POLES SHALL BE PROVIDED WITH INDIVIDUAL IDENTIFICATION DECALS PLACED ABOVE THE IDENTIFICATION TAG FACING THE DIRECTION OF APPROACHING TRAFFIC AND FORMATTED AS FOLLOWS:
   3 DIGIT SERVICE PANEL NUMBER TO BE PLACED HORIZONTALLY
   3 DIGIT POLE NUMBER TO BE PLACED VERTICALLY
6. EXISTING LIGHTING POLE IDENTIFICATION TAGS AND DECALS SHALL BE REMOVED AND REPLACED PER GENERAL NOTES 4 AND 5. ALL SERVICE PANELS SHALL BE PROVIDED WITH IDENTIFICATION DECALS ON THE CONTROL CENTER CABINET.
7. TRANSFORMER BASES SHALL BE CALCULATED INTO THE TOTAL POLE LENGTH TO ACHEIVE THE REQUIRED LIGHT FIXTURE MOUNTING HEIGHT.
8. LIGHT POLES SHALL BE INSTALLED WITH VIBRATION-RESISTANT SOCKETS.
9. DAMPERS SHALL BE PLACED INSIDE ALL POLES TO REDUCE POLE VIBRATION.
10. VDOT STANDARD LF-1 POLE FOUNDATION SHALL BE USED FOR ALL LIGHT POLES UNLESS OTHERWISE NOTED.

JUNCTION BOXES:

11. JUNCTION BOXES SHALL BE JB-S2 UNLESS OTHERWISE NOTED.
12. JUNCTION BOX LOCATIONS DEPICTED IN THE PLANS ARE SCHEMATIC IN NATURE.
13. FOR LIGHTING CIRCUITS CONNECTED TO VDOT SERVICE PANELS JUNCTION BOX LIDS SHALL BE LABELED "VDOT ELEC."
14. JUNCTION BOXES MAY BE RELOCATED IN THE FIELD AS NECESSARY, PROVIDED THEY REMAIN WITHIN THE RIGHT-OF-WAY, DO NOT CONFLICT WITH UTILITIES, AND REMAIN OUTSIDE THE PAVEMENT SECTION.

CONDUIT:

15. CONDUIT LOCATIONS ARE DIAGRAMMATIC. FIELD ADJUSTMENTS SHALL BE MADE AS REQUIRED TO STAY WITHIN THE LIMITS OF CONSTRUCTION, OUT OF DITCH LINES, AWAY FROM FENCE POSTS, AND TO CLEAR OBSTRUCTIONS.
16. ALL NON-BORED CONDUITS SHALL BE INSTALLED WITH STANDARD ECI-1.
17. ALL PROPOSED CONDUIT BYPASSING LIGHT POLE FOUNDATIONS SHALL HAVE A 3 FT. PREFERRED CLEARANCE AND A 1 FT. MINIMUM CLEARANCE FROM EDGE OF FOUNDATION.
18. ALL CONDUIT PLACED IN TRENCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18 INCHES.
19. ALL EMPLY CONDUIT SHALL BE CAPPED.
20. CONDUIT SHALL BE DIRECTIONALLY BORED WHERE THE PLANS SHOW BORED CONDUIT.
21. DIRECTIONAL BORING UNDER ROADWAY SHALL BE AT A MINIMUM DEPTH OF 5' BELOW SURFACE ELEVATION.
22. VERIFY THE DEPTH OF ALL EXISTING UNDERGROUND UTILITIES AT LOCATIONS WHERE PROPOSED CONDUIT BORE OR TRENCH IS CROSSING TO AVOID ANY DISRUPTION TO THE EXISTING UNDERGROUND UTILITIES.

ELECTRICAL:

23. CONDUCTOR CABLES TERMINATING IN JUNCTION BOXES OR LIGHT POLES SHALL BE TEST CAPPED AND HAVE A SLACK OF 3 FT. PER CONDUCTOR.
24. (2)-#10 AWG CONDUCTORS SHALL BE INSTALLED FROM SPLICES IN LIGHT POLE BASE TO LUMINAIRE. (1)-#10 AWG CONDUCTOR SHALL BE A GROUNDING CONDUCTOR WITH GREEN INSULATION AND SHALL BE INSTALLED FROM GROUNDING LUG AT BASE OF LIGHT POLE TO LUMINAIRE. FOR LIGHT POLES WITH 2 LUMINAIRES,(4)-#10 AWG CONDUCTORS SHALL BE INSTALLED FROM SPLICES IN LIGHT POLE BASE TO LUMINAIRE. (2)-#10 AWG CONDUCTORS SHALL BE A GROUNDING CONDUCTOR WITH GREEN INSULATION AND SHALL BE INSTALLED FROM GROUNDING LUG AT BASE OF LIGHT POLE TO LUMINAIRE.
25. ALL SPLICE KIT FUSES SHALL BE 20 AMPS AND RATED FOR A MINIMUM OF 600V SERVICE. CABLE CONNECTORS SHALL BE COMPRESSION TYPE, APPLIED BY MEANS OF A COMPRESSION TOOL. CONNECTORS SHALL BE FABRICATED FROM HIGH STRENGTH COPPER ALLOY.
    A. EACH CABLE CONNECTOR KIT SHALL BE FURNISHED WITH ALL COMPONENT PARTS DESCRIBED UNDER THE VARIOUS LISTED TYPES. EACH KIT SHALL CONTAIN SUFFICIENT SILICONE COMPOUND TO LUBRICATE METAL PARTS AND THE HOUSING FOR EACH ASSEMBLY ALONG WITH COMPLETE INSTALLATION INSTRUCTIONS.
    B. ALL HOUSINGS SHALL BE MADE OF WATER RESISTANT SYNTHETIC RUBBER SUITABLE FOR BURIAL IN THE GROUND OR EXPOSURE TO SUN LIGHT. EACH HOUSING SHALL FORM A WATERTIGHT SEAL AROUND THE CABLE AT THE POINT OF DISCONNECTION AND BETWEEN THE INSERT BODY AND ENVELOPING Y HOUSING.
    C. ALL COPPER PINS, SOCKETS, AND FUSE CONTACTS SHALL HAVE A MINIMUM CONDUCTIVITY OF 90 PERCENT. THE CRIMPABLE PORTION SHALL BE FULLY ANNEALED WHILE THE REST OF THE DEVICE IS MAINTAINED IN ITS ORIGINAL STATE.
    D. SLEEVES SHALL BE RIGID, MOLDED INSULATING MATERIAL OF SUFFICIENT OUTSIDE DIAMETER TO FORM A WATERTIGHT FIT WITH ITS RELATED HOUSING. WALL THICKNESS SHALL BE 0.10 INCH MAXIMUM, AND SLEEVE LENGTHS OF 4 INCHES AND 7 INCHES SHALL BE AVAILABLE.
    E. PLASTIC SLEEVES SHALL NOT BE USED.
26. LIGHTING CONTROL CENTERS SHALL BE IN ACCORDANCE WITH VDOT STANDARD DRAWINGS UNLESS DETAILED IN THIS SET.
27 THE EQUIPMENT GROUNDING CONDUCTOR (EGC) SHALL BE THE SAME SIZE AS THE LARGEST POWER CONDUCTOR.
28. INSTALLATION OF ELECTRICAL SERVICES SHALL BE COORDINATED WITH LOCAL POWER COMPANY.
29. ALL LIGHTING EQUIPMENT GROUNDING SHALL BE PROVIDED PER VDOT STD. 1310.20 AND 1312.90. ALL GROUND RODS UTILIZED IN THIS PROJECT SHALL MEET VDOT ROAD AND BRIDGE SPECIFICATION 238.02(h), PARAGRAPH 3. GROUND RODS SHALL BE INSTALLED IN ALL PROPOSED JUNCTION BOXES.
30. EQUIPMENT GROUNDING CONDUCTORS IN CONDUIT ENTERING AND EXITING LIGHT POLE FOUNDATIONS SHALL TERMINATE AT THE GROUND LUG AT BASE OF LIGHT POLE.
31. ALL CONDUCTORS IN JUNCTION BOXES, POLES AND EQUIPMENT ENCLOSURES SHALL BE PROVIDED WITH INDIVIDUAL BRASS TAGS, DIE STAMPED WITH SERVICE PANEL NUMBER, PHASE(S) AND CIRCUIT IDENTIFICATIONS. CONDUCTORS SHALL BE NEATLY ARRANGED AND SUPPORTED ON CABLE RACKS.
32 THE CONTRACTOR SHALL COORDINATE WITH VDOT TO VERIFY SERVICE PANEL NUMBERS. SERVICE PANEL NUMBERS SHOWN ON THE PLANS ARE CONSTRUCTION NUMBERS AND ARE NOT NECESSARILY THE PERMANENT PANEL ID.

MISC:

33. ALL LUMINAIRES TO BE INSTALLED SHALL EITHER MEET OR EXCEED THE AVERAGE MAINTAINED ILLUMINANCE, UNIFORMITY, AND VEILING LUMINANCE RATIO RESULTS OF THE LUMINAIRE MANUFACTURER AND MODEL NO. USED IN THE PHOTOMETRIC ANALYSIS.
34. CONTRACTOR SHALL TEST PIT TO IDENTIFY ANY POTENTIAL UNDERGROUND UTILITY CONFLICTS PRIOR TO INSTALLING ALL PROPOSED LIGHTING EQUIPMENT FOUNDATIONS AND PRIOR TO BORING OR JACKING ALL CONDUITS.
35. THE CONTRACTOR SHALL DOCUMENT AND BE RESPONSIBLE FOR THE CONDITION OF EXISTING MATERIALS INCLUDING POLES, CONDUITS AND CONDUCTORS PRIOR TO REUSE.THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DEPARTMENT OF ANY DEFECTIVE MATERIAL PRIOR TO BEING SENT TO STORAGE. ANY REPLACEMENT OF DEFECTIVE MATERIAL MUST BR APPROVED BY THE VDOT ENGINEER.

MISC (CONT.):

36. ALL SOIL REMOVED FOR JUNCTION BOXES, FOUNDATIONS, ETC.MUST BE COVERED WITH EROSION CONTROL MATTING TO PREVENT EROSION. SOIL NOT USED FOR BACKFILL MUST BE REMOVED ON THE SAME WORKING DAY.
37. ALL TRENCHING MUST BE BACKFILLED AND RESTORED TO ITS ORIGINAL CONDITION ON THE SAME WORKING DAY IN WHICH TRENCHING OCCURED. AREAS WHICH ARE NOT RESEEDED, MULCHED OR SODDED MUST BE COVERED WITH EROSION CONTROL MATTING TO PREVENT EROSION. ALL SOIL NOT USED FOR BACKFILL MUST BE REMOVED ON THE SAME WORKING DAY.
38. CONTRACTOR TO COORDINATE ALL WORK WITH OTHER CONTRACTORS TO AVOID CONFLICTS WITH OTHER WORK. CONDUITS ARE TO AVOID BRIDGE PIERS, ABUTMENTS, GUARDRAILS, FOUNDATIONS, AND OTHER CIVIL WORKS.
39. THE CONTRACTOR SHALL INSPECT AND VERIFY ALL EXISTING EQUIPMENT PROPOSED TO BE RELOCATED AND/OR REUSED SUCH THAT PERFORMANCE SPECIFICATIONS ARE MET AND MATERIALS, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FOUNDATIONS AND LUMINAIRES ARE STRUCTURALLY SOUND FOR RELOCATION AND/OR REUSE.
40. ALL ABOVE GROUND STRUCTURES LOCATED BEHIND GUARDRAIL SHALL COMPLY WITH MINIMUM CLEARANCES PER VDOT STANDARD 1311.10 TO ACCOUNT FOR W BEAM BARRIER DEFLECTION. IF SITE CONSTRAINTS PREVENT THE INSTALLATION OF LIGHT POLES TO BE INSTALLED OUTSIDE ZONE OF BARRIER DEFLECTION, THEN THE LIGHT POLES SHALL BE INSTALLED ON BREAKAWAY TRANSFORMER BASES.
41. CONTRACTOR SHALL INCLUDE A COPY OF THE AS-BUILT LIGHTING PLANS IN ALL PROPOSED LIGHTING CONTROL CENTER CABINETS. THE PANEL SCHEDULE SHALL INCLUDE ALL POLE NUMBERS FOR POLES WITH LUMINAIRES THAT ARE ASSOCIATED WITH EACH CIRCUIT. THE POLE NUMBERS SHALL MATCH THE POLE NUMBERS ON THE IDENTIFICATION TAG INSTALLED ON EACH LIGHT POLE.
42. PHOTOCELLS SHALL BE PROVIDED ON SERVICE PANELS ONLY. NO PHOTOCELLS SHALL BE PROVIDED ON LIGHT FIXTURES.
43. VIBRATION DAMPERS SHALL BE PROVIDED IN ALL LIGHT POLES.
44. ALL UTILITIES SHALL BE MARKED PRIOR TO INITIATION OF CONSTRUCTION. ARRANGE FOR MISS UTILITIY TO MARK UNDERGROUND UTILITIES. IN ADDITION, CONTACT THE PROJECT ENGINEER ARRANGE FOR VDOT TO MARK VDOT'S CABLES AND CONDUITS, PROVIDING TWO WORKING DAYS NOTICE.

INDEX OF SHEETS

Sheet No.:	Sheet Description:
9(1)	Index of Sheets,General Notes & Legend
9(2)	Photometric Plan
9(3)	Lighting Plan
9(4)	Panel Board Schedule
9(5)	Lighting Details

ROADWAY LIGHTING LEGEND

PROPOSED LIGHT POLE AND LUMINARE	PROPOSED JUNCTION BOX (JB-S2,UNLESS OTHERWISE NOTED) — J
EXISTING POST TOP LUMINAIRE TO REMAIN	PROPOSED SERVICE PANEL — SE-6
EXISTING LIGHT POLE TO REMAIN	EXISTING SERVICE PANEL — SE-E
EXISTING LIGHT POLE TO BE REMOVED	PROPOSED CONDUIT
PROPOSED LIGHTING CONTROL CENTER,TYPE — CCW-IC	

NOTE:
ALL CONDUIT PLACED IN TRENCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 18in.

POLE CALLOUT INFORMATION

SERVICE PANEL ID — POLE NUMBER
POLE H6-002
STA.3320+00 — STATION NUMBER
OFFSET & SIDE — 60.6' RT
166GE BL — REFERENCED BASELINE

SERVICE PANEL CALLOUT INFORMATION

SERVICE PANEL ID
SERV PNL # H6
SERVICE PANEL TYPE — SE9-TYPE H
STA 3320+50 — STATION NUMBER
OFFSET & SIDE — 66.0'RT
166GE BL — REFERENCED BASELINE

LUMINAIRE CALLOUT INFORMATION

WATTAGE
MOUNTING HEIGHT
ARM LENGTH
241 - 50 - 0 (S) — SHIELDED
SP#H6 - 1 — CIRCUIT NUMBER
SERVICE PANEL ID

A
2"
2" - 4 #6AWG-CKT
1 EGC

ITEMS ENCLOSED WITHIN BOX ARE PROPOSED ITEMS

INDICATES PROPOSED CONDUIT W/ ELECTRICAL FOR ROADWAY LIGHTING.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB	DATE: 05/27/22
DRAWN BY: PJH	DATE: 05/27/22
CHECKED BY: ASM	DATE: 05/27/22
APPROVED BY: SMS	DATE: 05/27/22

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

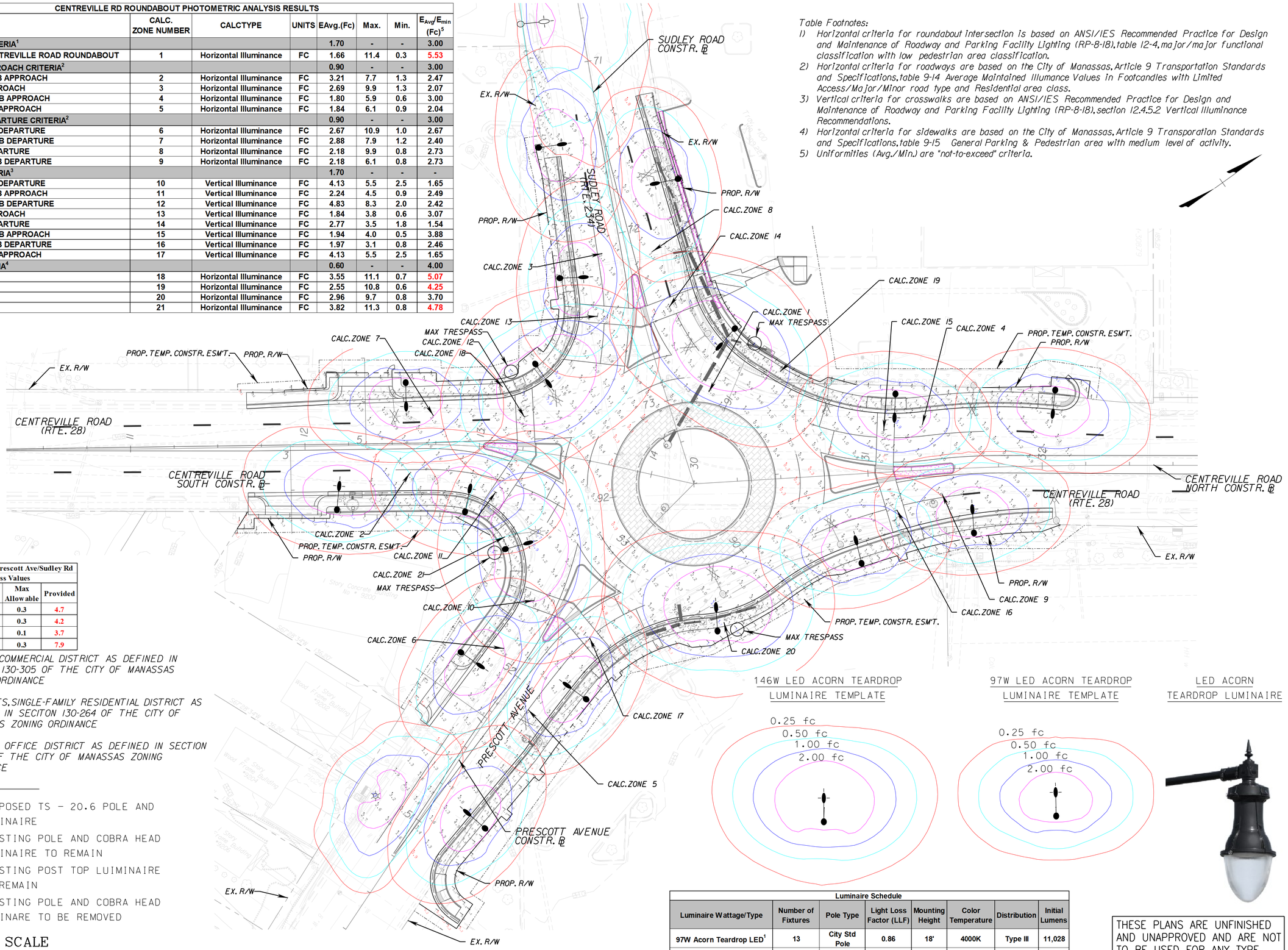
LIGHTING PLAN
INDEX OF SHEETS, GENERAL NOTES & LEGEND

SHEET
9(1)

CENTREVILLE RD ROUNDABOUT PHOTOMETRIC ANALYSIS RESULTS							
	CALC. ZONE NUMBER	CALCTYPE	UNITS	EAvg.(Fc)	Max.	Min.	E_{Avg}/E_{min} (Fc)[5]
ROUNDABOUT CRITERIA[1]				1.70	-	-	3.00
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT	1	Horizontal Illuminance	FC	1.66	11.4	0.3	5.53
ROUNDABOUT APPROACH CRITERIA[2]				0.90	-	-	3.00
CENTERVILLE RD EB APPROACH	2	Horizontal Illuminance	FC	3.21	7.7	1.3	2.47
SUDLEY RD SB APPROACH	3	Horizontal Illuminance	FC	2.69	9.9	1.3	2.07
CENTERVILLE RD WB APPROACH	4	Horizontal Illuminance	FC	1.80	5.9	0.6	3.00
PRESCOTT AVE NB APPROACH	5	Horizontal Illuminance	FC	1.84	6.1	0.9	2.04
ROUNDABOUT DEPARTURE CRITERIA[2]				0.90	-	-	3.00
PRESCOTT AVE SB DEPARTURE	6	Horizontal Illuminance	FC	2.67	10.9	1.0	2.67
CENTERVILLE RD WB DEPARTURE	7	Horizontal Illuminance	FC	2.88	7.9	1.2	2.40
SUDLEY RD NB DEPARTURE	8	Horizontal Illuminance	FC	2.18	9.9	0.8	2.73
CENTERVILLE RD EB DEPARTURE	9	Horizontal Illuminance	FC	2.18	6.1	0.8	2.73
CROSSWALK CRITERIA[3]				1.70	-	-	-
PRESCOTT AVE SB DEPARTURE	10	Vertical Illuminance	FC	4.13	5.5	2.5	1.65
CENTERVILLE RD EB APPROACH	11	Vertical Illuminance	FC	2.24	4.5	0.9	2.49
CENTERVILLE RD WB DEPARTURE	12	Vertical Illuminance	FC	4.83	8.3	2.0	2.42
SUDLEY RD SB APPROACH	13	Vertical Illuminance	FC	1.84	3.8	0.6	3.07
SUDLEY RD NB DEPARTURE	14	Vertical Illuminance	FC	2.77	3.5	1.8	1.54
CENTERVILLE RD WB APPROACH	15	Vertical Illuminance	FC	1.94	4.0	0.5	3.88
CENTERVILLE RD EB DEPARTURE	16	Vertical Illuminance	FC	1.97	3.1	0.8	2.46
PRESCOTT AVE NB APPROACH	17	Vertical Illuminance	FC	4.13	5.5	2.5	1.65
SIDEWALKS CRITERIA[4]				0.60	-	-	4.00
SW SIDEWALK	18	Horizontal Illuminance	FC	3.55	11.1	0.7	5.07
NW SIDEWALK	19	Horizontal Illuminance	FC	2.55	10.8	0.6	4.25
NE SIDEWALK	20	Horizontal Illuminance	FC	2.96	9.7	0.8	3.70
SE SIDEWALK	21	Horizontal Illuminance	FC	3.82	11.3	0.8	4.78

Table Footnotes:

1) *Horizontal criteria for roundabout intersection is based on ANSI/IES Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting (RP-8-18), table 12-4, major/major functional classification with low pedestrian area classification.*
2) *Horizontal criteria for roadways are based on the City of Manassas, Article 9 Transportation Standards and Specifications, table 9-14 Average Maintained Illumance Values in Footcandles with Limited Access/Major/Minor road type and Residential area class.*
3) *Vertical criteria for crosswalks are based on ANSI/IES Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting (RP-8-18), section 12.4.5.2 Vertical Illuminance Recommendations.*
4) *Horizontal criteria for sidewalks are based on the City of Manassas, Article 9 Transporation Standards and Specifications, table 9-15 General Parking & Pedestrian area with medium level of activity.*
5) *Uniformities (Avg./Min.) are "not-to-exceed" criteria.*



Centreville Rd & Prescott Ave/Sudley Rd Trespass Values			
Quadrant	Zoning	Max Allowable	Provided
N	B-4[1]	0.3	4.7
E	B-4[1]	0.3	4.2
S	R-2S[2]	0.1	3.7
W	B-1[3]	0.3	7.9

1. GENERAL COMMERCIAL DISTRICT AS DEFINED IN SECTION 130-305 OF THE CITY OF MANASSAS ZONING ORDINANCE
2. SMALL LOTS, SINGLE-FAMILY RESIDENTIAL DISTRICT AS DEFINED IN SECITON 130-264 OF THE CITY OF MANASSAS ZONING ORDINANCE
3. BUSINESS OFFICE DISTRICT AS DEFINED IN SECTION 130-301 OF THE CITY OF MANASSAS ZONING ORDINANCE

LEGEND

- PROPOSED TS - 20.6 POLE AND LUMINAIRE
- EXISTING POLE AND COBRA HEAD LUMINAIRE TO REMAIN
- EXISTING POST TOP LUIMINAIRE TO REMAIN
- EXISTING POLE AND COBRA HEAD LUMINARE TO BE REMOVED

GRAPHIC SCALE

25' 0' 25' 50'

1" = 25'

146W LED ACORN TEARDROP LUMINAIRE TEMPLATE

97W LED ACORN TEARDROP LUMINAIRE TEMPLATE

LED ACORN TEARDROP LUMINAIRE

Luminaire Schedule							
Luminaire Wattage/Type	Number of Fixtures	Pole Type	Light Loss Factor (LLF)	Mounting Height	Color Temperature	Distribution	Initial Lumens
97W Acorn Teardrop LED[1]	13	City Std Pole	0.86	18'	4000K	Type III	11,028
146W Acorn Teardrop LED[1]	4	City Std Pole	0.86	18'	4000K	Type III	19,627

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

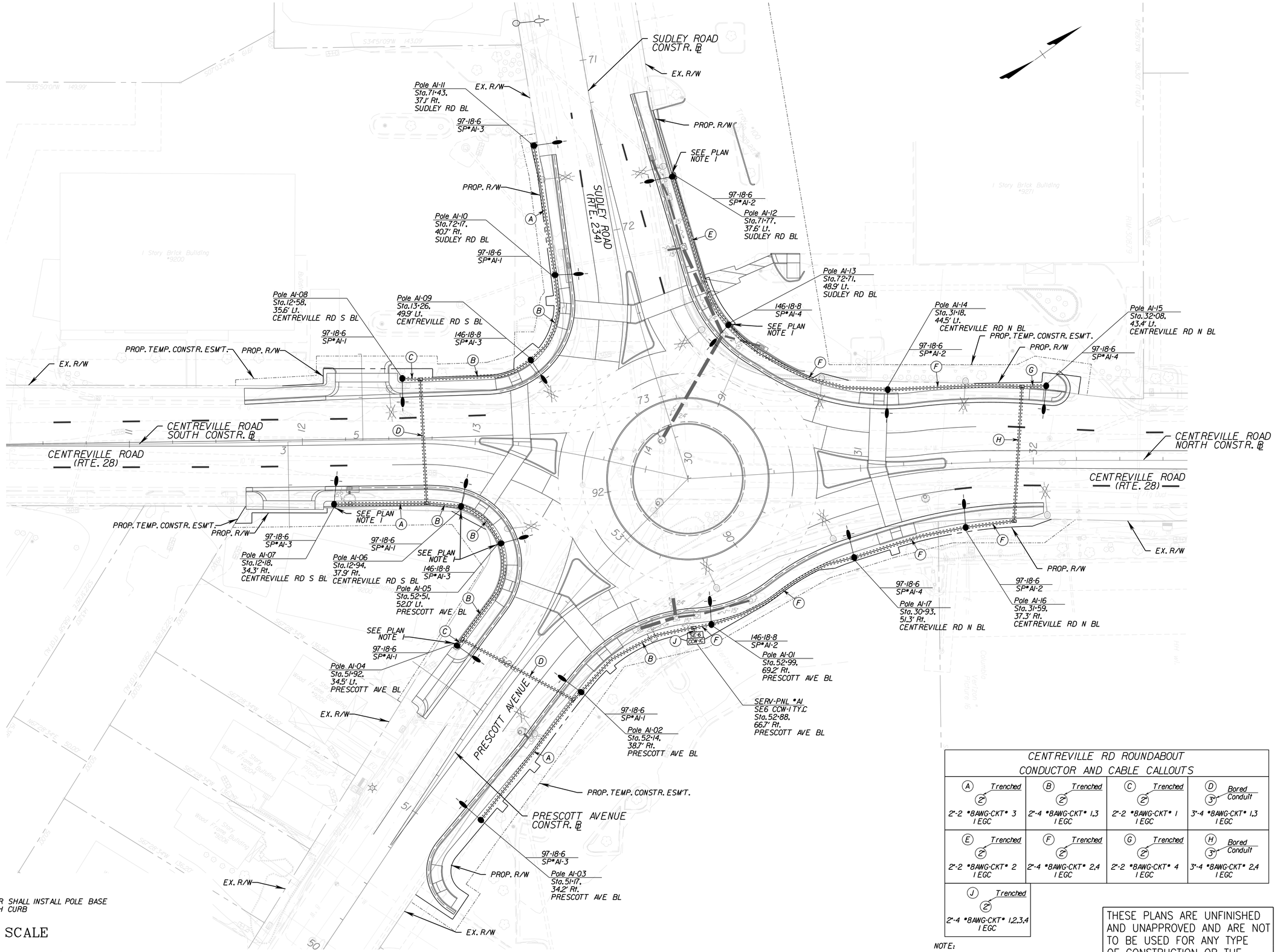
DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085		
DATE OF PLAN ISSUANCE:	TBD		
CONSULTANT PROJECT ID:	RK&K		
DESIGNED BY:	RSB	DATE:	05/27/22
DRAWN BY:	PJH	DATE:	05/27/22
CHECKED BY:	ASM	DATE:	05/27/22
APPROVED BY:	SMS	DATE:	05/27/22

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

LIGHTING PLAN
PHOTOMETRIC PLAN

SHEET
9(2)



PLAN NOTE:

1. CONTRACTOR SHALL INSTALL POLE BASE FLUSH WITH CURB

CENTREVILLE RD ROUNDABOUT CONDUCTOR AND CABLE CALLOUTS			
(A) Trenched (2") 2'-2 *8AWG-CKT* 3 1 EGC	(B) Trenched (2") 2'-4 *8AWG-CKT* 1,3 1 EGC	(C) Trenched (2") 2'-2 *8AWG-CKT* 1 1 EGC	(D) Bored Conduit (3") 3'-4 *8AWG-CKT* 1,3 1 EGC
(E) Trenched (2") 2'-2 *8AWG-CKT* 2 1 EGC	(F) Trenched (2") 2'-4 *8AWG-CKT* 2,4 1 EGC	(G) Trenched (2") 2'-2 *8AWG-CKT* 4 1 EGC	(H) Bored Conduit (3") 3'-4 *8AWG-CKT* 2,4 1 EGC
(J) Trenched (2") 2'-4 *8AWG-CKT* 1,2,3,4 1 EGC			

NOTE:

1. ALL EGC CABLES SHALL BE THE SAME SIZE AS THE FEEDER CABLES.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB DATE:	05/27/22
DRAWN BY: PJH DATE:	05/27/22
CHECKED BY: ASM DATE:	05/27/22
APPROVED BY: SMS DATE:	05/27/22

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

LIGHTING PLAN

SHEET
9(3)

ELECTRICAL SERVICE PANEL NO AI

STANDARD	TYPE	VOLTAGE	SAFETY SWITCH		
			VOLTAGE	AMPERAGE	
SE-6	A	120/240 (LIGHTING)	240	100	

CCW-I TYPE C

AMPERAGE											AMPERAGE
LOAD DESCRIPTION	LOAD AMPS	CONTACTOR	CIRCUIT BREAKER	WIRE #	CIRCUIT NO.	CIRCUIT NO.	WIRE #	CIRCUIT BREAKER	CONTACTOR	LOAD AMPS	LOAD DESCRIPTION
AI-02, AI-04, AI-06, AI-08, AI-10	4.04	20	15	8	1	2	8	15	20	3.64	AI-01, AI-12, AI-14, AI-16
AI-03, AI-05, AI-07, AI-09, AI-11	4.86	20	15	8	3	4	8	15	20	2.83	AI-13, AI-15, AI-17
To Photocell			15		5	6					space
space					7	8					space
space					9	10					space
space					11	12					space

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

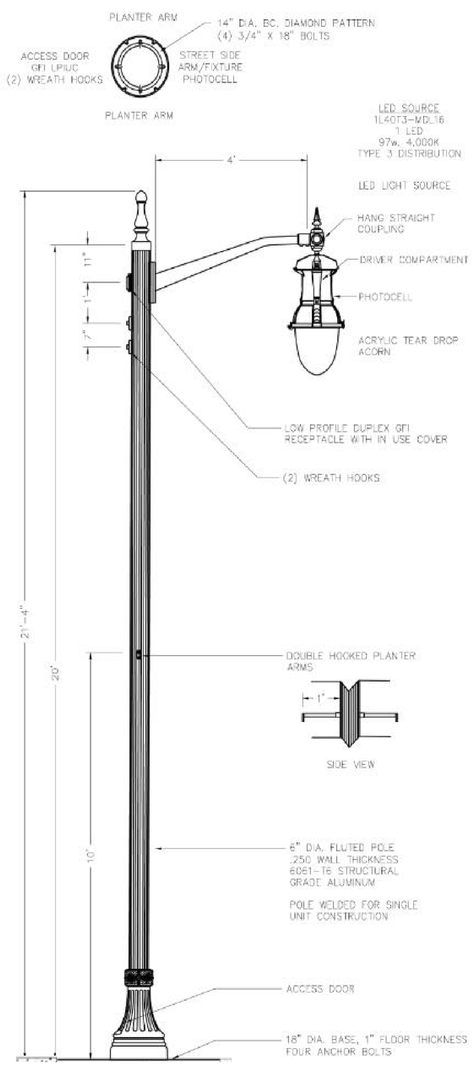
REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: RSB DATE: 05/27/22
DRAWN BY: PJH DATE: 05/27/22
CHECKED BY: ASM DATE: 05/27/22
APPROVED BY: SMS DATE: 05/27/22

LIGHTING PLAN
PANEL BOARD SCHEDULE

SHEET
9(4)



ACORN LIGHTING FIXTURE

REVISION & DATE		
DIRECTOR	April 5, 2018 DATE	CITY OF MANASSAS, VIRGINIA DEPARTMENT OF PUBLIC WORKS
DRAWING NUMBER		TS - 20.6

LED ACORN
TEARDROP LUMINAIRE

97W LED ACORN TEARDROP LUMINAIRE:
LED-1914-1L40T3-MDL16
146W LED ACORN TEARDROP LUMINAIRE:
LED-1914-3L40T3-MDL10

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

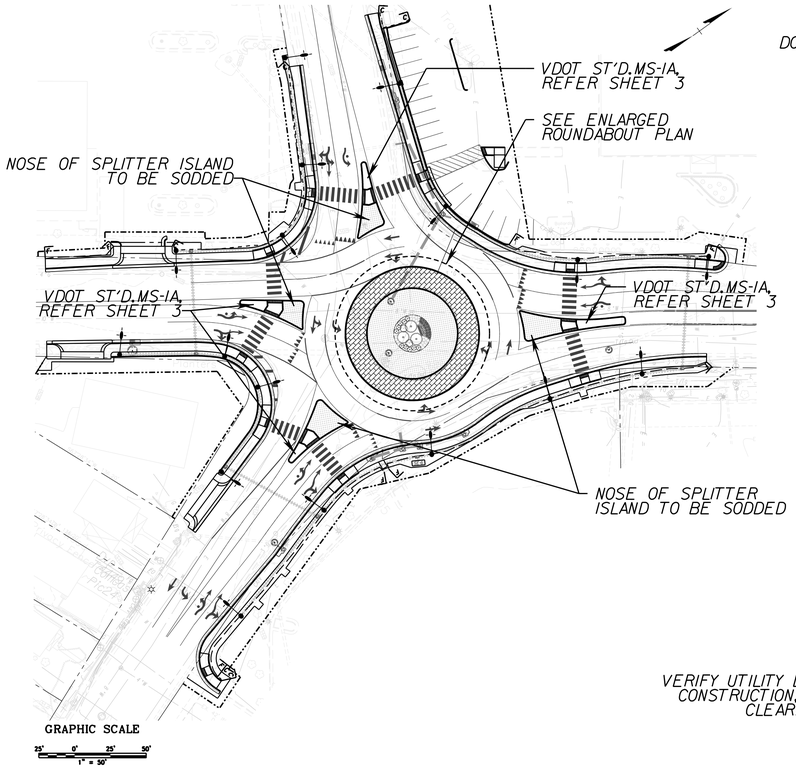
MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: RSB	DATE: 05/27/22
DRAWN BY: PJH	DATE: 05/27/22
CHECKED BY: ASM	DATE: 05/27/22
APPROVED BY: SMS	DATE: 05/27/22

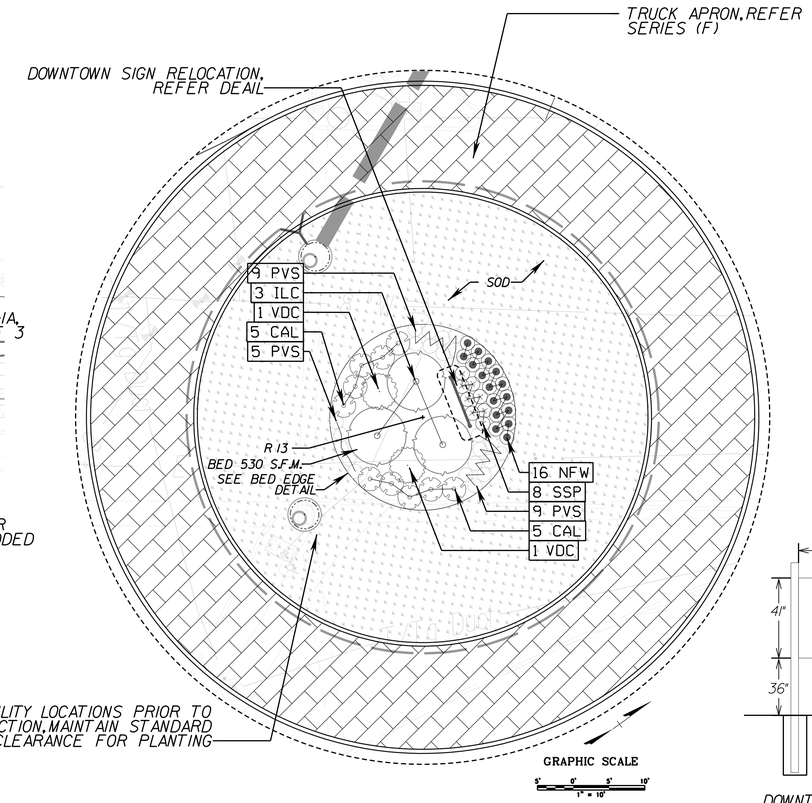
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

LIGHTING PLAN
LIGHTING DETAILS

SHEET
9(5)

LANDSCAPE PLAN





ENLARGED ROUNDABOUT PLAN

LEGEND

- EVERGREEN TREE
- MED DECIDUOUS SHRUB
- HERBACEOUS PERENNIAL
- ORNAMENTAL GRASS
- TURFGRASS - SOD
- RELOCATED DOWNTOWN SIGN

MASTER PLANT SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	CONTAINER	HEIGHT	CALIPER	SPACING	NOTES
TREES								
ILC	3	*ILEX 'MARY NELL'*	MARY NELL HOLLY	B&B	6-8 FT.	-	AS SHOWN	FULL, HEAVY, SYMMETRICAL
SHRUBS								
CAL	10	*CLETHRA ALNIFOLIA "SIXTEEN CANDLES"*	SUMMERSWEET	#5 CONT.	2'-3' HT.	-	AS SHOWN	FULL
VDC	2	*VIBURNUM DENTATUM 'CHRISTOM'*	BLUE MUFFIN ARROWWOOD VIBURNUM	#5 CONT.	2'-3' HT.	-	AS SHOWN	
HERBACEOUS & ORNAMENTAL GRASSES								
PVS	23	*PANICUM VIRGATUM 'SHENANDOAH*	SHENANDOAH SWITCH GRASS	#3 CONT.	-	-	AS SHOWN	
NFW	16	*NEPETA *FAASSENII 'WALKER'S LOW'*	CATMINT	#2 CONT.	-	-	AS SHOWN	
SSP	8	*SALVIA SPLENDENS*	SCARLET SAGE	#1 CONT.	-	-	AS SHOWN	

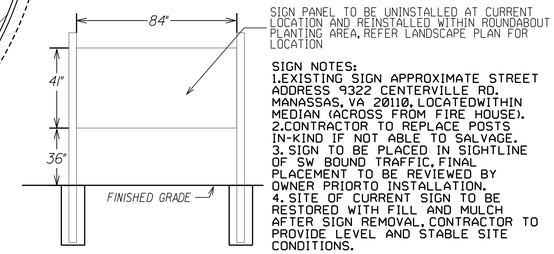
PLANTING NOTES:

1. SOD SHALL BE TALL FESCUSE, SELECTED IN ACCORDANCE WITH SECTION 244.02 OF THE VDOT 2020 ROAD AND BRIDGE SPECIFICATIONS.

2. MULCH SHALL BE DOUBLE SHREDED HARDWOOD, REFER TO SECTION 605 OF THE VDOT 2020 ROAD AN BRIDGE SPECIFICATIONS.

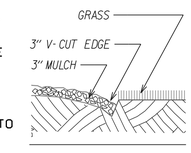
3. CONTRACTOR TO ADHERE TO ESTABLISHMENT PERIOD OUTLINED IN VDOT STANDARDS, SECTION 605.4.

4. ALL REQUESTS FOR SUBSTITUIONS SHALL BE SUBMITTED TO LANDSCAPE ARCHITECT.

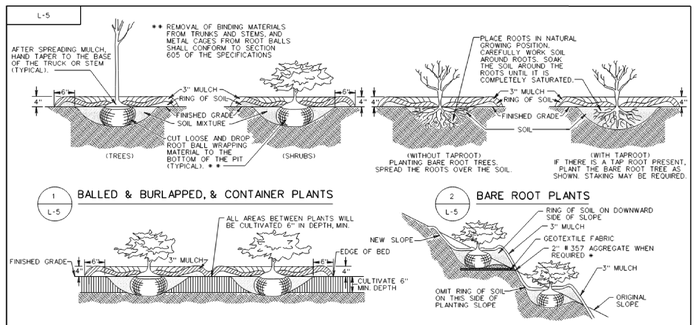


SIGN NOTES:
1. EXISTING SIGN APPROXIMATE STREET ADDRESS 9322 CENTERVILLE RD. MANASSAS, VA 20110, LOCATEDWITHIN MEDIAN (ACROSS FROM FIRE HOUSE).
2. CONTRACTOR TO REPLACE POSTS IN-KIND IF NOT ABLE TO SALVAGE.
3. SIGN TO BE PLACED IN SIGHTLINE OF SW BOUND TRAFFIC, FINAL PLACEMENT TO BE REVIEWED BY OWNER PRIORTO INSTALLATION.
4. SITE OF CURRENT SIGN TO BE RESTORED WITH FILL AND MULCH AFTER SIGN REMOVAL, CONTRACTOR TO PROVIDE LEVEL AND STABLE SITE CONDITIONS.

DOWNTOWN SIGN RELOCATION
N.T.S.



BED EDGE DETAIL
N.T.S.



* WHEN A PORTION OF A PLANT BED EXTENDS INTO AN AREA STEEPER THAN 4:1, CULTIVATION OF THAT PORTION SHALL BE OMITTED AND THE ENTIRE AREA BETWEEN PLANTS SHALL BE MULCHED TO BLEND IN WITH THE CULTIVATED BED.

* PLANTING BEDS (CULTIVATED AND NON-CULTIVATED) SHALL BE CUT TO A MAXIMUM 4" IN HEIGHT BY MOWING, AND SHALL AFTERWARDS BE TREATED WITH HERBICIDE AS APPROVED AND DIRECTED BY THE ENGINEER AT LEAST 2 WEEKS PRIOR TO CULTIVATION, PLANTING, OR MULCHING.

* WHEN BARE ROOT PLANTS ARE USED IN BEDS, SHRUB AND ROOT PLACEMENT SHALL CONFORM TO DETAIL 2/L-5

* SFM FOLLOWING BED DESIGNATION STANDS FOR SQUARE FEET OF MULCH AT THE INDICATED QUANTITY.

* WHEN BARE ROOT PLANTS ARE USED ON SLOPE, SHRUB AND ROOT PLACEMENT SHALL CONFORM TO DETAIL 2/L-5

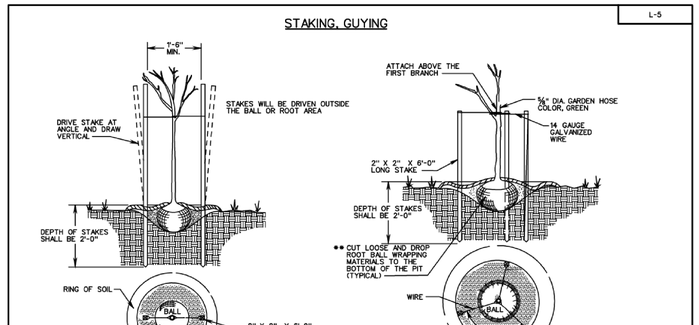
* ON SLOPES STEEPER THAN 3:1, THE FRONT CENTER OF THE PIT SHALL BE MODIFIED WHEN REQUIRED * TO INCLUDE A "V" CUT THE FULL DEPTH OF THE PIT. THE PIT SHALL BE DUG 2" DEEPER THAN SHOWN ON THE SUMMARY SHEET AND BACKFILLED WITH 2" OF #357 AGGREGATE, DAYLIGHTED TO THE SLOPE FACE, AND COVERED WITH GEOTEXTILE FABRIC PRIOR TO BACKFILLING WITH SOIL MIXTURE.

* SEE NOTE FOR PIT DRAINAGE MODIFICATION FOR SLOPE PLANTING SHEET 1201.06.

GENERAL NOTES:

1. SEE LANDSCAPE SUMMARY SHEET FOR PIT SIZES.
2. ROOT BALL SHALL BE POSITIONED LEVEL WITH FINISHED GRADE. SOIL MIXTURE SHALL TAPER ONTO BUT NOT OVER TOP OF THE ROOT BALL. MULCH SHALL EXTEND AT THE PROPER DEPTH OVER THE ENTIRE ROOT BALL AND PLANTING PIT, AND SHALL BE HAND TAPERED TO THE BASE OF ALL TRUNKS AND STEMS AFTER SPREADING.
3. THIS RULE SHALL GOVERN WITH THE FOLLOWING EXCEPTIONS:
   A. SLOPE PLANTINGS - SEE SLOPE PLANTING DETAILS.
   B. INCLUSION OF PIT DRAINAGE SYSTEM - POSITION TOP OF ROOT BALL THE SAME AS FINISHED GRADE.
   C. TREE GRATE PLANTING - SEE TREE GRATE PLANTING DETAILS IN PLANS.

VDOT ROAD AND BRIDGE STANDARDS		PLANTING DETAILS	SPECIFICATION REFERENCE
SHEET 1 OF 1	REVISION DATE	VIRGINIA DEPARTMENT OF TRANSPORTATION	605 245 203
1201.04			



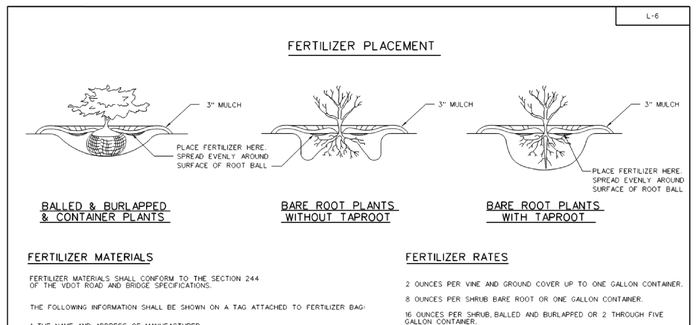
GENERAL NOTES

1. ALL DECIDUOUS TREES OVER 4 FT. IN HEIGHT AND ALL EVERGREEN TREES OVER 4 FT. IN HEIGHT OR TALLER SHALL BE STAKED AND GUYED WITH 3 STAKES AS SHOWN.
2. MULTIPLE STEMMED DECIDUOUS TREES 4 FT. IN HEIGHT SHALL BE STAKED WITH 3 STAKES IN SUCH A MANNER AS TO STABILIZE 3 MAINSTEMS.
3. THE WOOD STAKES SHALL BE 2"X2"X8'-0" LONG DRESSED HARDWOOD AND DECAY RESISTANT.

THE WIRE TIES SHALL BE 14. GAUGE, GALVANIZED WIRE, AND BE PROVIDED WITH A ONE FOOT PIECE OF GREEN RUBBER HOSE PLACED TO PREVENT INJURY TO THE BARK. THERE SHOULD BE A 1" - 3" SWAY IN THE TREE (THE WIRES SHOULD NOT BE PULLED TIGHT) FOR BEST ESTABLISHMENT. OTHER ANCHORING METHODS AND MATERIALS MAY BE APPROVED FOR USE BY THE ENGINEER.

** REMOVAL OF BINDING MATERIALS FROM TRUNKS AND STEMS, AND METAL CAGES FROM ROOT BALLS SHALL CONFORM TO THE CURRENT ROAD & BRIDGE SPECS.

SPECIFICATION REFERENCE	PLANTING DETAILS	VDOT ROAD AND BRIDGE STANDARDS	
605 244	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1
		1201.05	



FERTILIZER MATERIALS

FERTILIZER MATERIALS SHALL CONFORM TO THE SECTION 244 OF THE VDOT ROAD AND BRIDGE SPECIFICATIONS.

THE FOLLOWING INFORMATION SHALL BE SHOWN ON A TAG ATTACHED TO FERTILIZER BAG:

1. THE NAME AND ADDRESS OF MANUFACTURER
2. NAME OF MATERIAL
3. NUMBER OF NET POUNDS OF READY MIXED MATERIALS IN THE PACKAGE
4. CHEMICAL COMPOSITION AND ANALYSIS
5. GUARANTEED ANALYSIS (VA. DEPARTMENT OF AGRICULTURE)

MULCHING MATERIALS

BARK-SHALL BE DOUBLE SHREDDED HARDWOOD BARK, DISEASE FREE, BROWN IN COLOR AND SHALL CONFORM TO THE NATIONAL BARK AND SOIL PRODUCER ASSOC. STANDARDS FOR CLASSIFICATION, PARTICLE SIZE, PERCENTAGE WOOD CONTENT, MOISTURE RETENTION AND PH RATING. OTHER MULCH MATERIAL MAY BE USED WITH APPROVAL FROM THE ENGINEER.

FERTILIZER RATES

2 OUNCES PER VINE AND GROUND COVER UP TO ONE GALLON CONTAINER.

8 OUNCES PER SHRUB BARE ROOT OR ONE GALLON CONTAINER.

16 OUNCES PER SHRUB, BALLED AND BURLAPPED OR 2 THROUGH FIVE GALLON CONTAINER.

24 OUNCES PER TREE UNDER 2" CALIPER (INCLUDES MULTI-STEMMED AND EVERGREEN TREES UNDER 8')

32 OUNCES PER TREE OVER 2" CALIPER (INCLUDES MULTI-STEMMED AND EVERGREEN TREES OVER 8' IN HEIGHT)

THE FERTILIZER SHALL BE APPLIED AS A SURFACE APPLICATION, SPREAD EVENLY OVER TOP OF THE ROOT BALL AND PLANT PIT SOIL PRIOR TO MULCHING.

FERTILIZER SHALL NOT BE MIXED WITH THE SOIL MIXTURE.

APPROVED MULCHES

TYPE	DEPTH
DOUBLE SHREDDED HARDWOOD BARK	3"

SPECIFICATION REFERENCE	FERTILIZER AND MULCH	VDOT ROAD AND BRIDGE STANDARDS	
605 244	VIRGINIA DEPARTMENT OF TRANSPORTATION	REVISION DATE	SHEET 1 OF 1
		1201.07	

NOTES:
1. ALL LANDSCAPING SHALL BE DONE IN ACCORDANCE WITH VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, 2020 VDOT ROAD AND BRIDGE SPECIFICATIONS.
2. ALL PLANTS PROVIDED BY THE CONTRACTOR SHALL MEET OR SURPASS THE SPECIFICATIONS PROVIDED IN THE PLANT SCHEDULE AND PROJECT SPECIFICATIONS. PLANTS SHOULD BE FULL, HEAVY, AND HEALTHY AT THE TIME OF PLANTING. THE LANDSCAPE ARCHITECT SHALL REJECT ANY PLANT MATERIAL NOT MEETING THESE GUIDELINES AND REQUIRE REPLACEMENT.
3. THE CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES SHOWN ON PLANS AND SCHEDULES AND CLARIFY ANY DISCREPANCIES WITH LANDSCAPE ARCHITECT PRIOR TO PURCHASING PLANT MATERIAL. THE PLANS SHALL GOVERN.
4. THE CONTRACTOR SHALL VERIFY SOD AND MULCH QUANTITIES SHOWN ON THE PLANS AND CLARIFY ANY DISCREPANCIES WITH LANDSCAPE ARCHITECT PRIOR TO PURCHASING MATERIAL. SOD LIMITS SHOWN ARE APPROXIMATE ONLY. ALL LAWN AREAS (PROPOSED OR EXISTING TO REMAIN) DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE SODDED.
5. THE CONTRACTOR SHALL TAKE PROPER PRECAUTIONS NOT TO DAMAGE EXISTING ADJACENT FACILITIES AND STRUCTURES AND RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER.
6. BEFORE BEGINNING ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT LEAST 5 WORKING DAYS PRIOR TO THE START OF WORK.
7. EXISTING UTILITIES SHOWN ON DRAWINGS ARE FOR CONTRACTORS CONVENIENCE ONLY. THE CONTRACTOR MUST LOCATE AND VERIFY ALL SUCH INFORMATION, INCLUDING INFORMATION THAT MAY HAVE BEEN OMITTED FROM THE PLANS. THE CONTRACTOR IS RESPONSIBLE, AT HIS OWN COST, FOR REPAIRING AND RESTORING ANY DAMAGED UTILITIES CAUSED BY HIS WORK.
8. ALL PLANTING OPERATIONS SHALL BE UNDER THE SUPERVISION OF AN EXPERIENCED PLANTSMAN.
9. FOR THE PLANT ESTABLISHMENT PERIOD AND FOR LANDSCAPE MAINTENANCE RESPONSIBILITY FOLLOWING FINAL ACCEPTANCE, SEE VDOT STANDARD SPECIFICATIONS.

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: BD DATE:	05/20/22
DRAWN BY: BD DATE:	05/20/22
CHECKED BY: MM DATE:	05/26/22
APPROVED BY: DATE:	

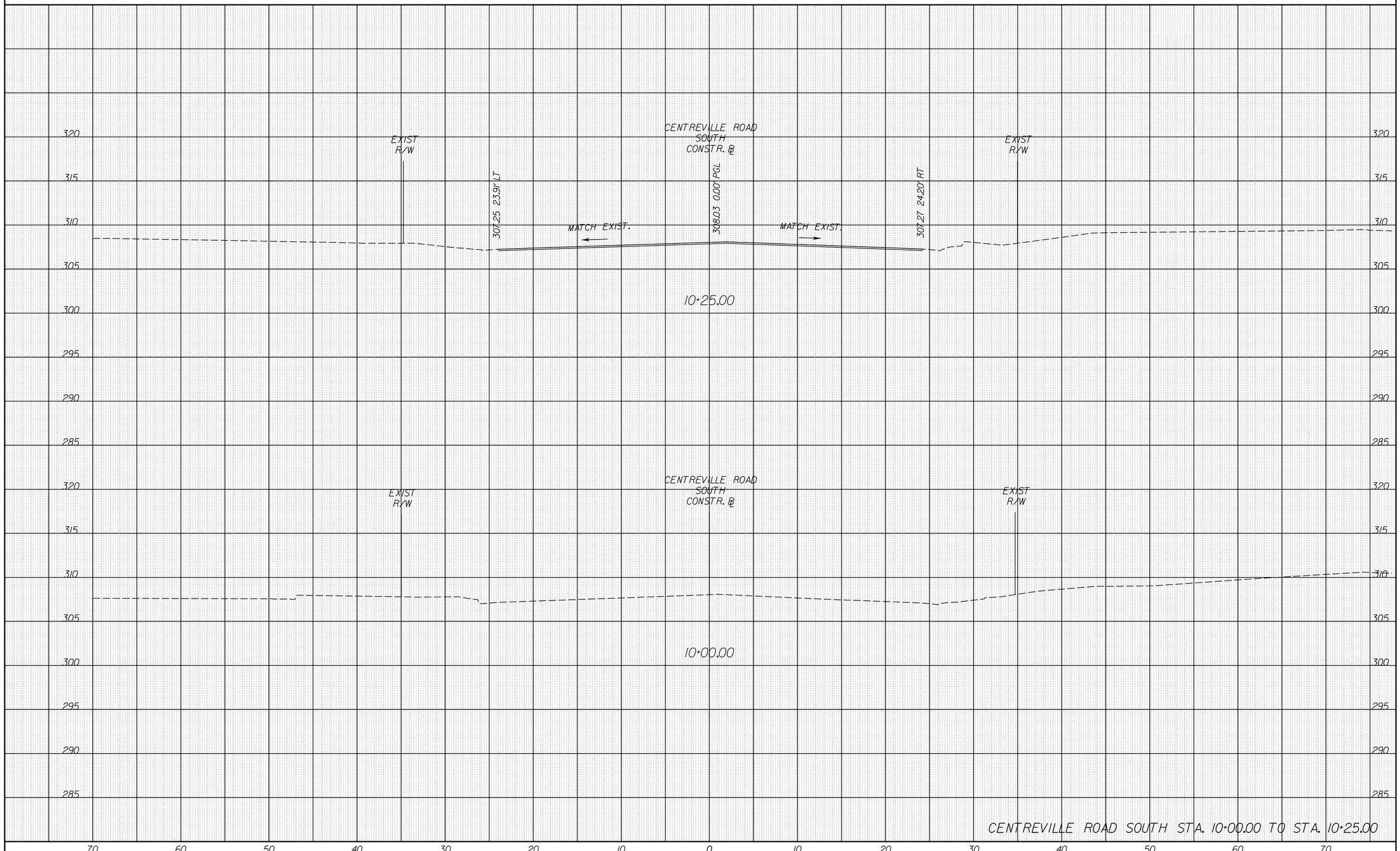
SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

LANDSCAPE PLAN

SHEET
10
SCALE 1" = 50'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

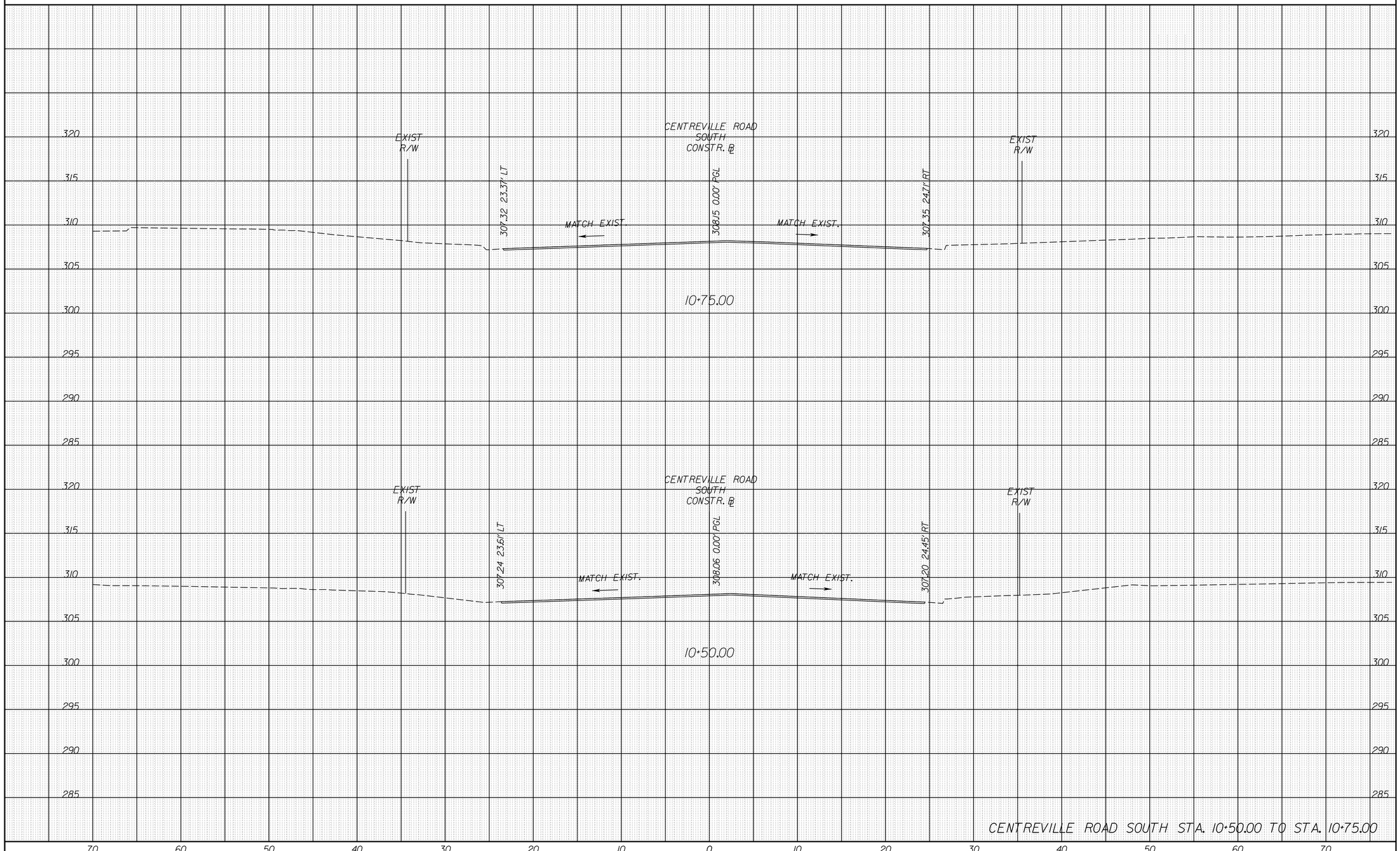
CROSS SECTIONS

SHEET
X1

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

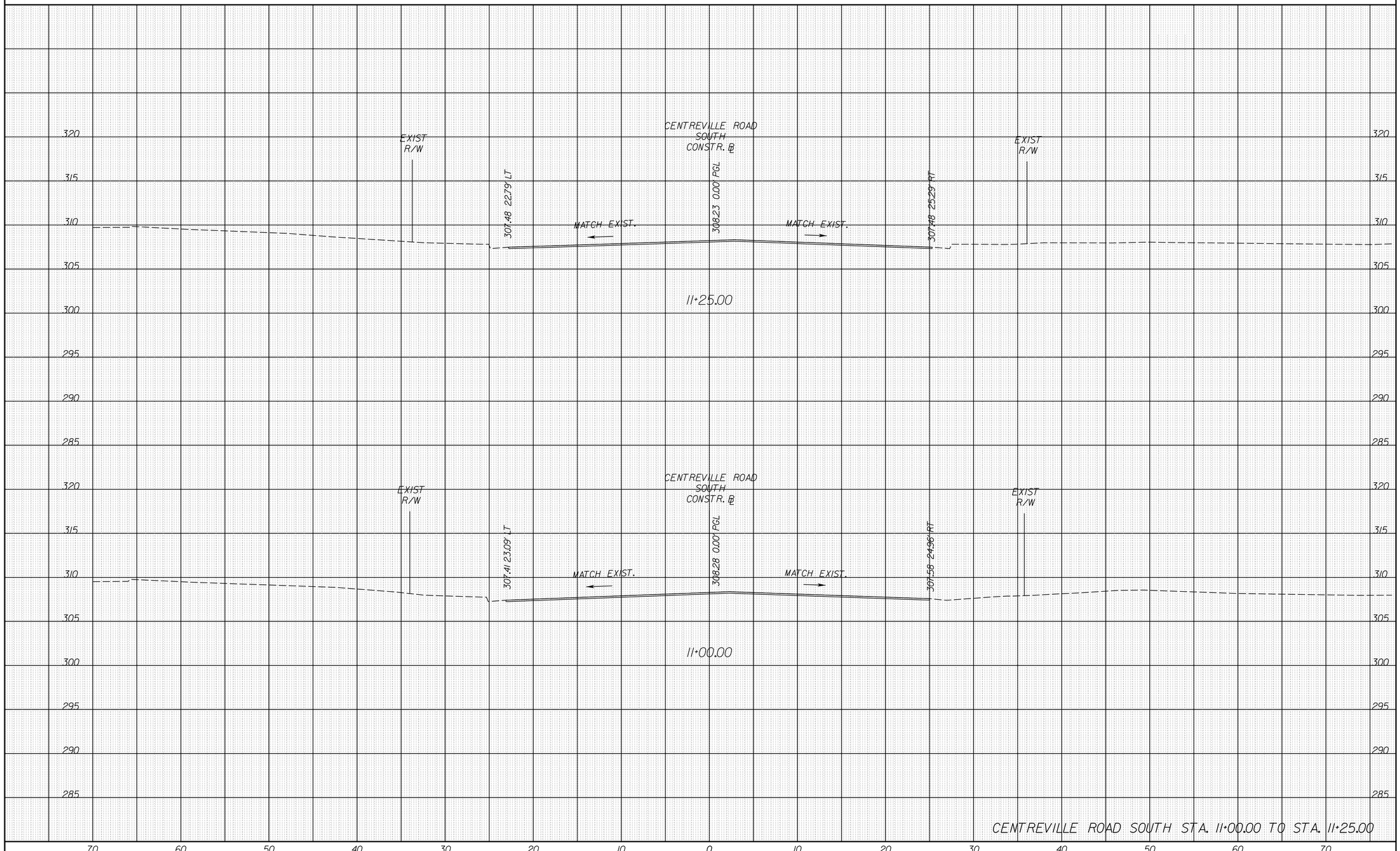
CROSS SECTIONS

SHEET
X2

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

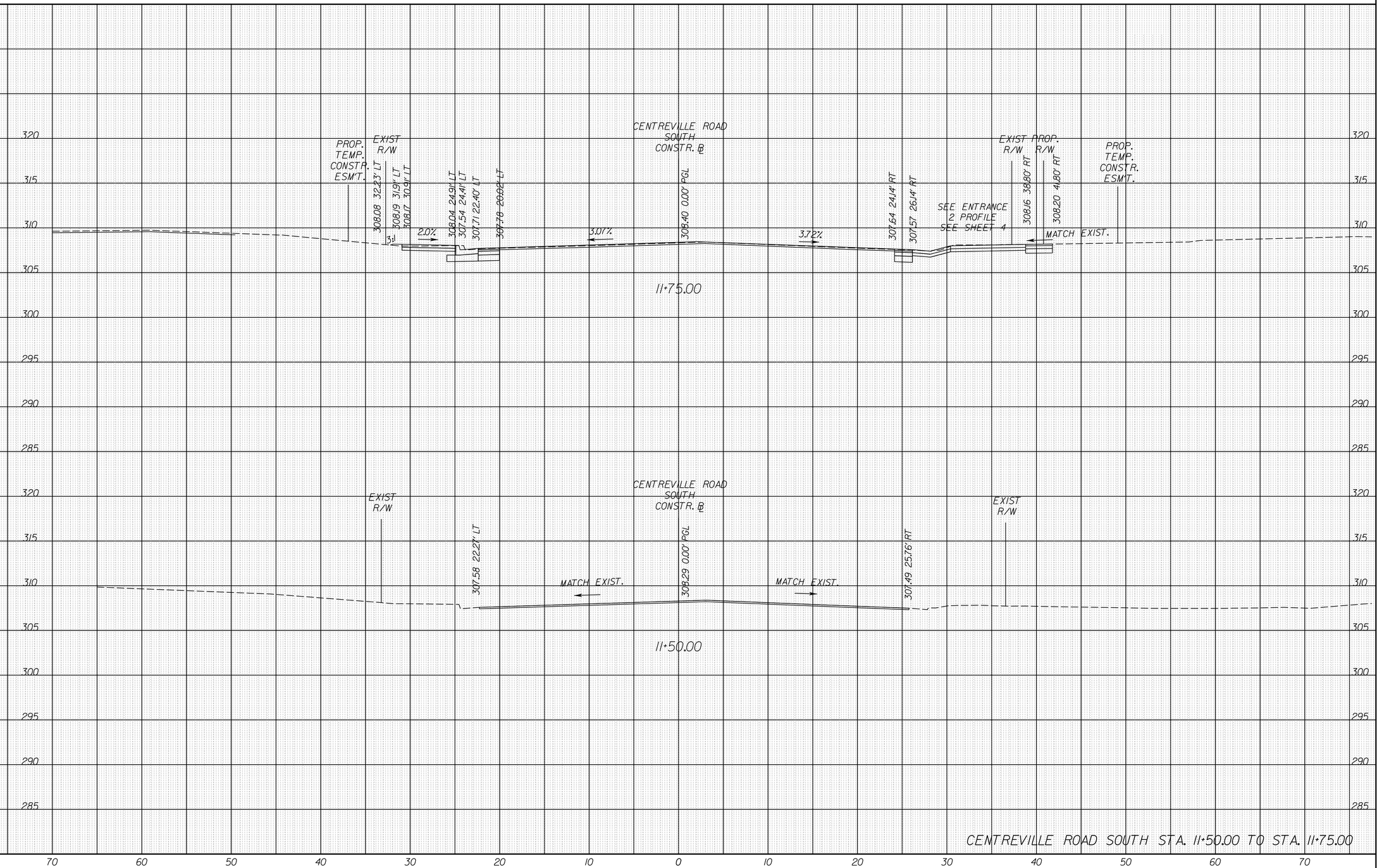
CROSS SECTIONS

SHEET
X3

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



CENTREVILLE ROAD SOUTH STA. 11+50.00 TO STA. 11+75.00

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

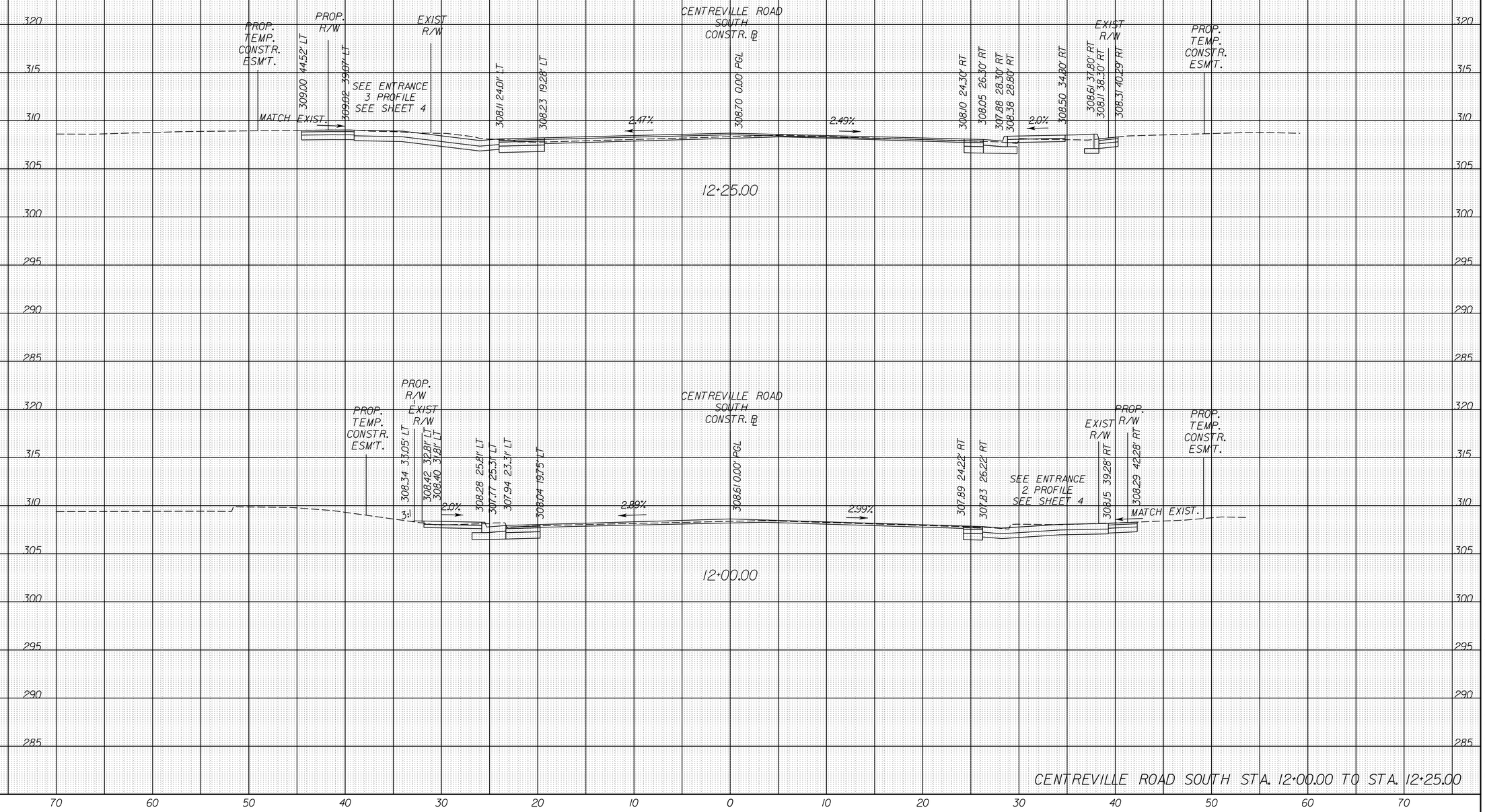
CROSS SECTIONS

SHEET
X4

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO:	T-085
DATE OF PLAN ISSUANCE:	TBD
CONSULTANT PROJECT ID:	RK&K
DESIGNED BY: DVL	DATE: 05/27/22
DRAWN BY: DVL	DATE: 05/27/22
CHECKED BY: MJK	DATE: 05/27/22
APPROVED BY:	DATE:

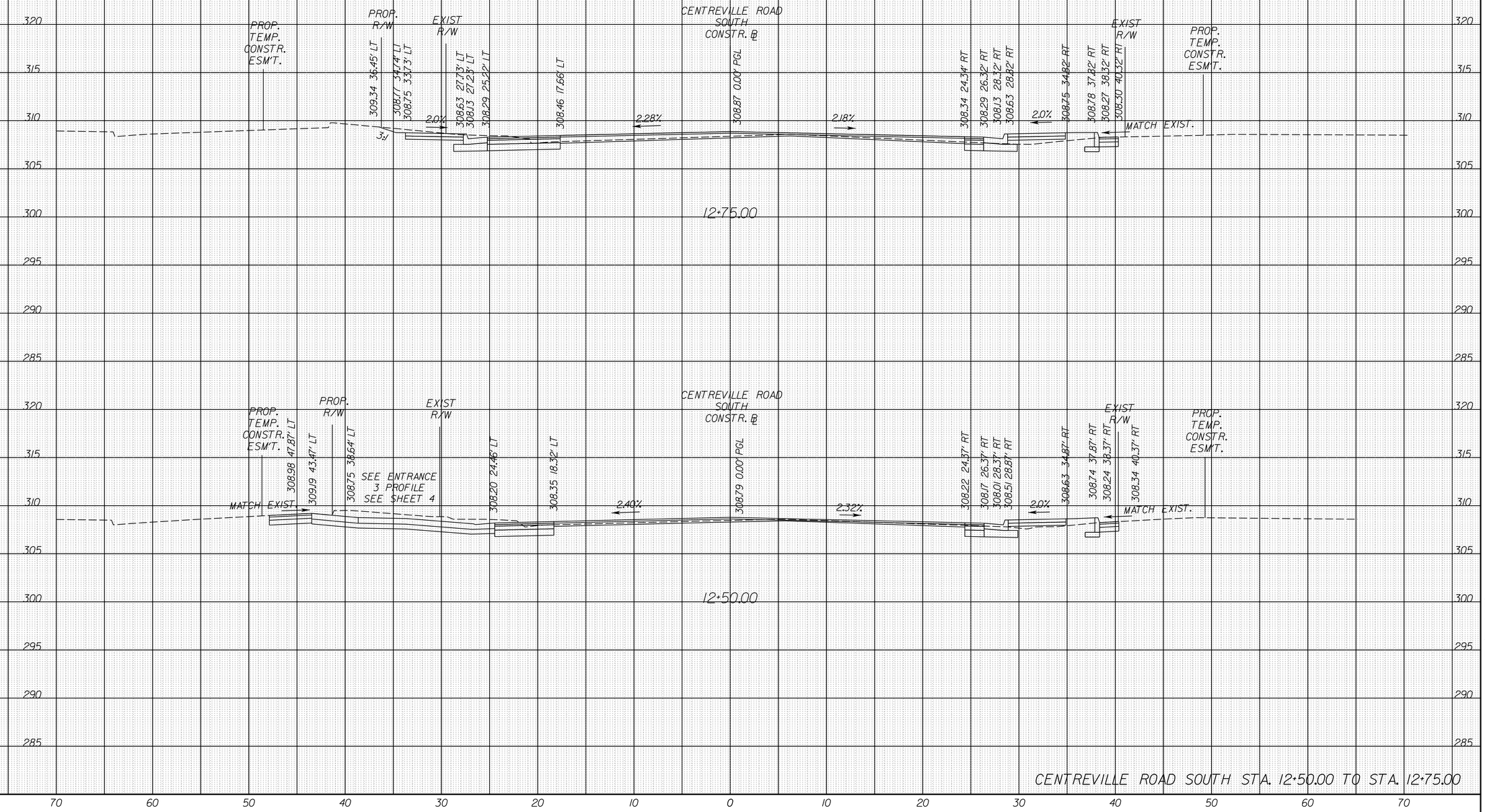
CROSS SECTIONS

SHEET
X5

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



CENTREVILLE ROAD SOUTH STA. 12+50.00 TO STA. 12+75.00

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

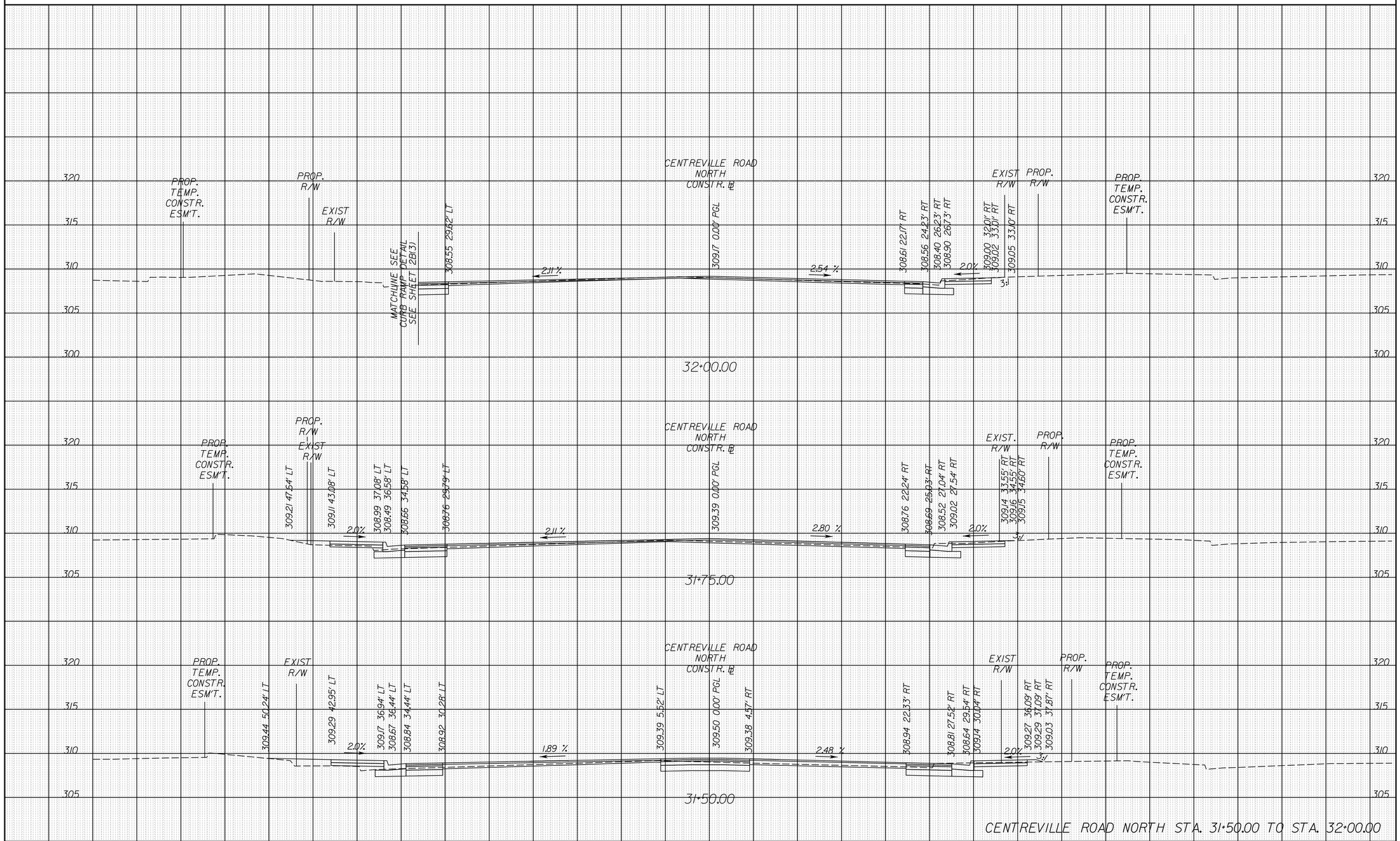
CROSS SECTIONS

SHEET
X6

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

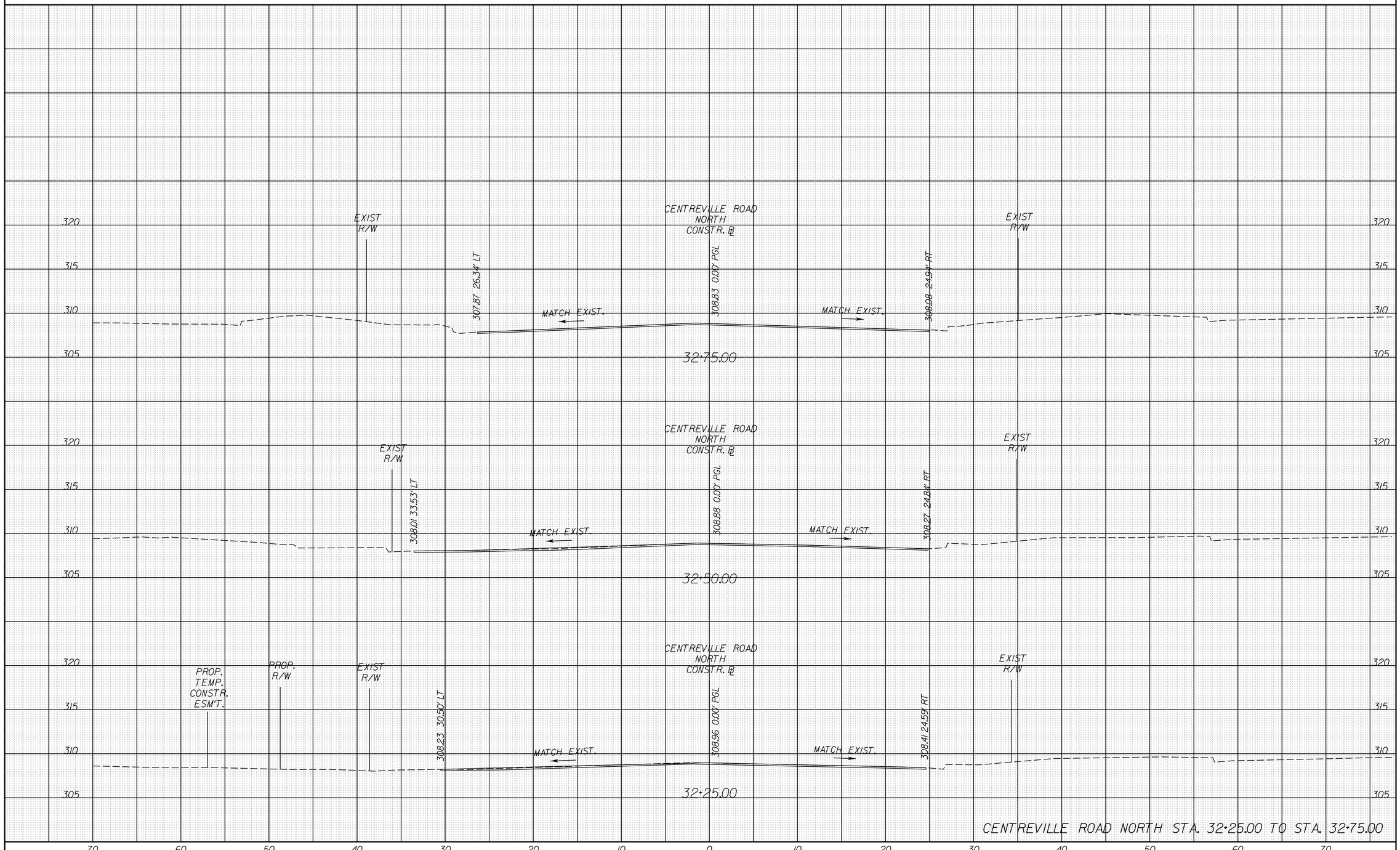
CROSS SECTIONS

SHEET
X7

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



CENTREVILLE ROAD NORTH STA. 32+25.00 TO STA. 32+75.00

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

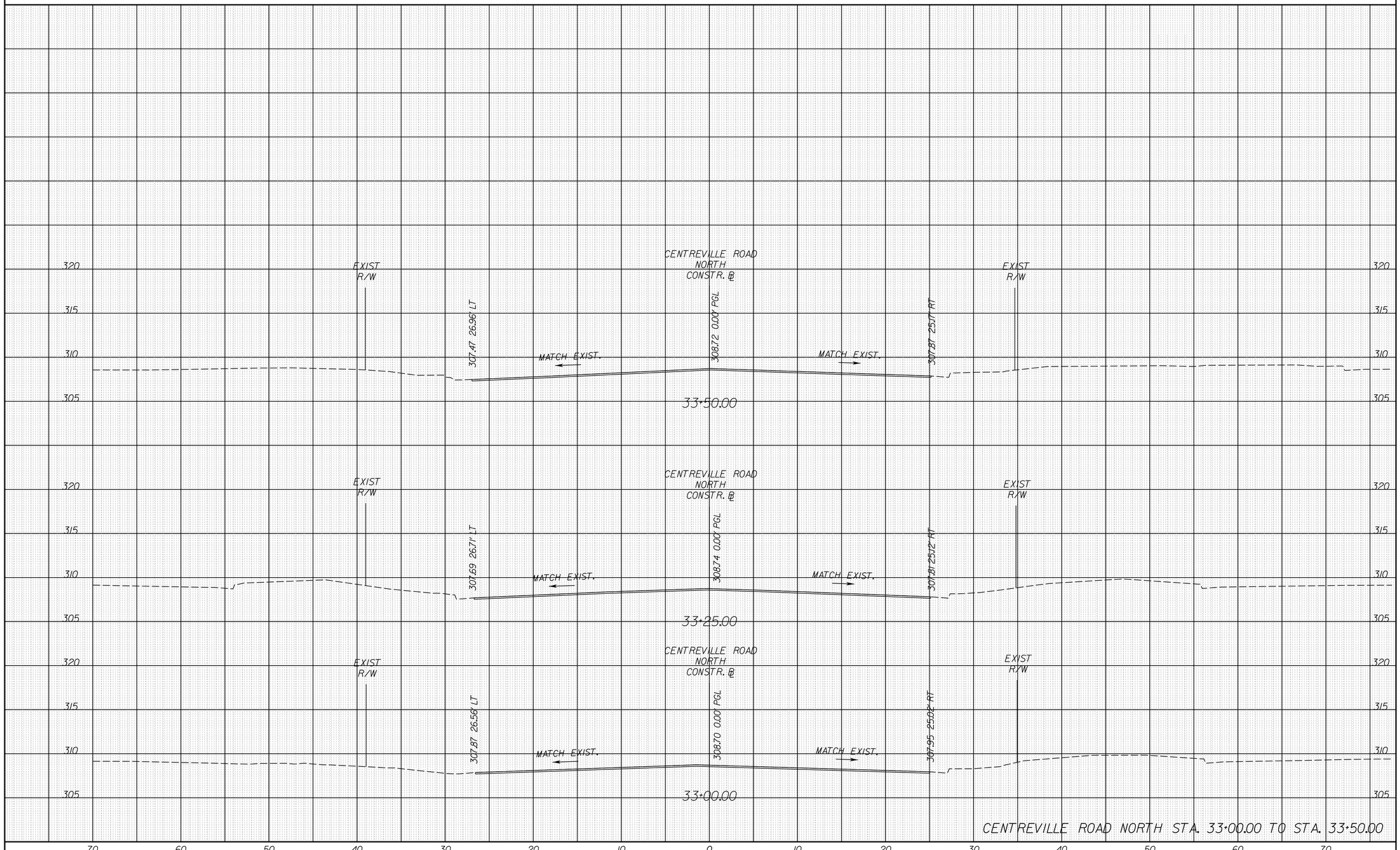
CROSS SECTIONS

SHEET
X8

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

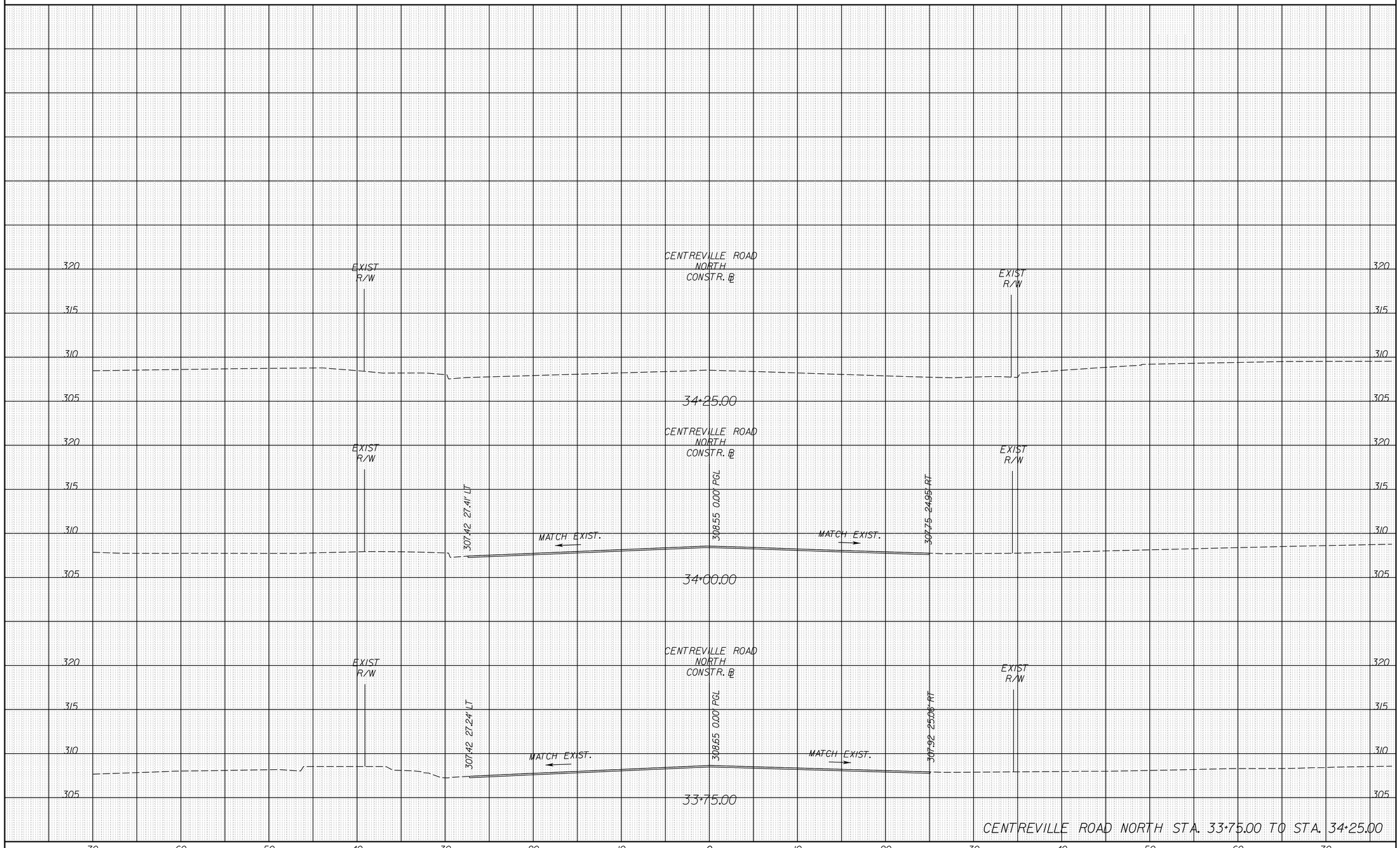
CROSS SECTIONS

SHEET
X9

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



CENTREVILLE ROAD NORTH STA. 33+75.00 TO STA. 34+25.00

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

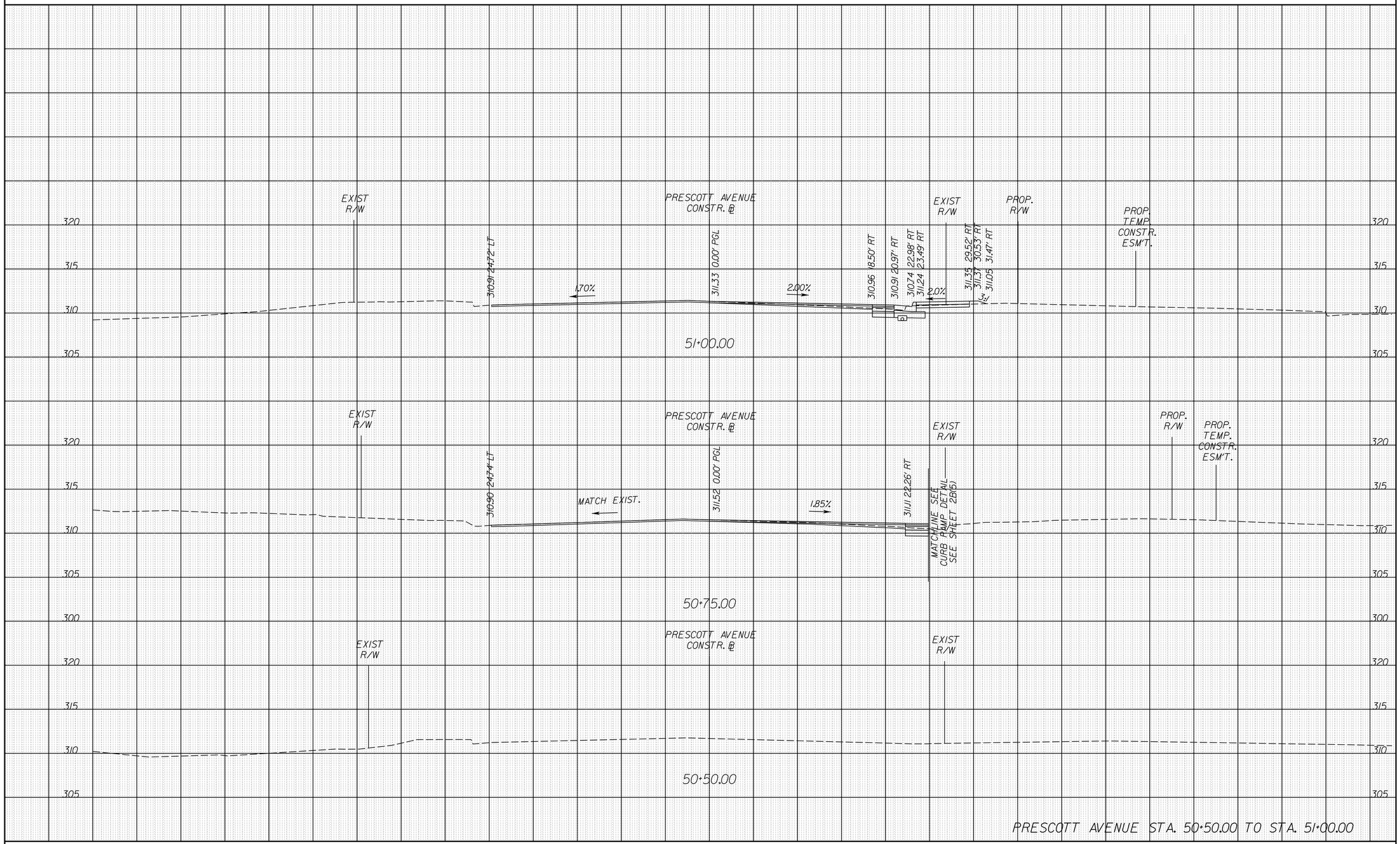
CROSS SECTIONS

SHEET
X10

SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

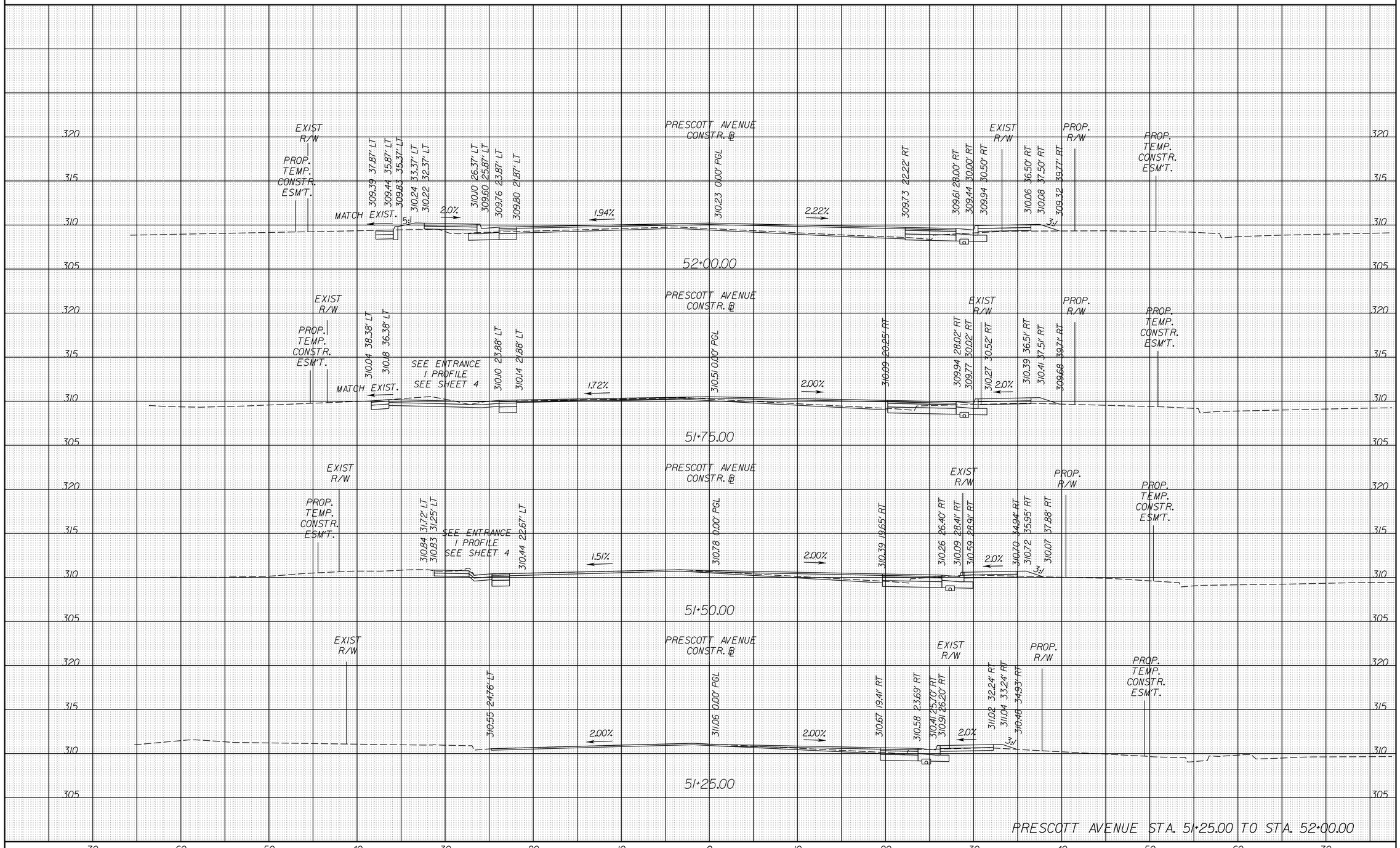
MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

CROSS SECTIONS

SHEET
X11
SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

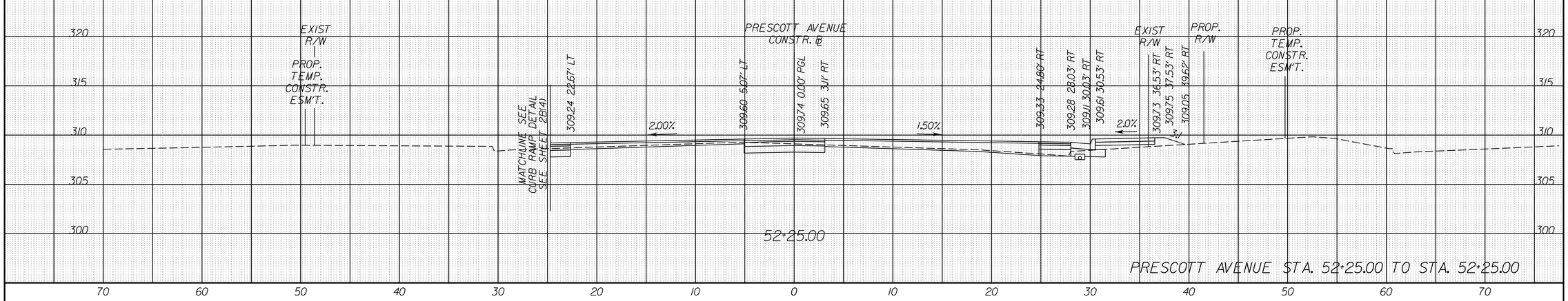
MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

CROSS SECTIONS

SHEET
X12
SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

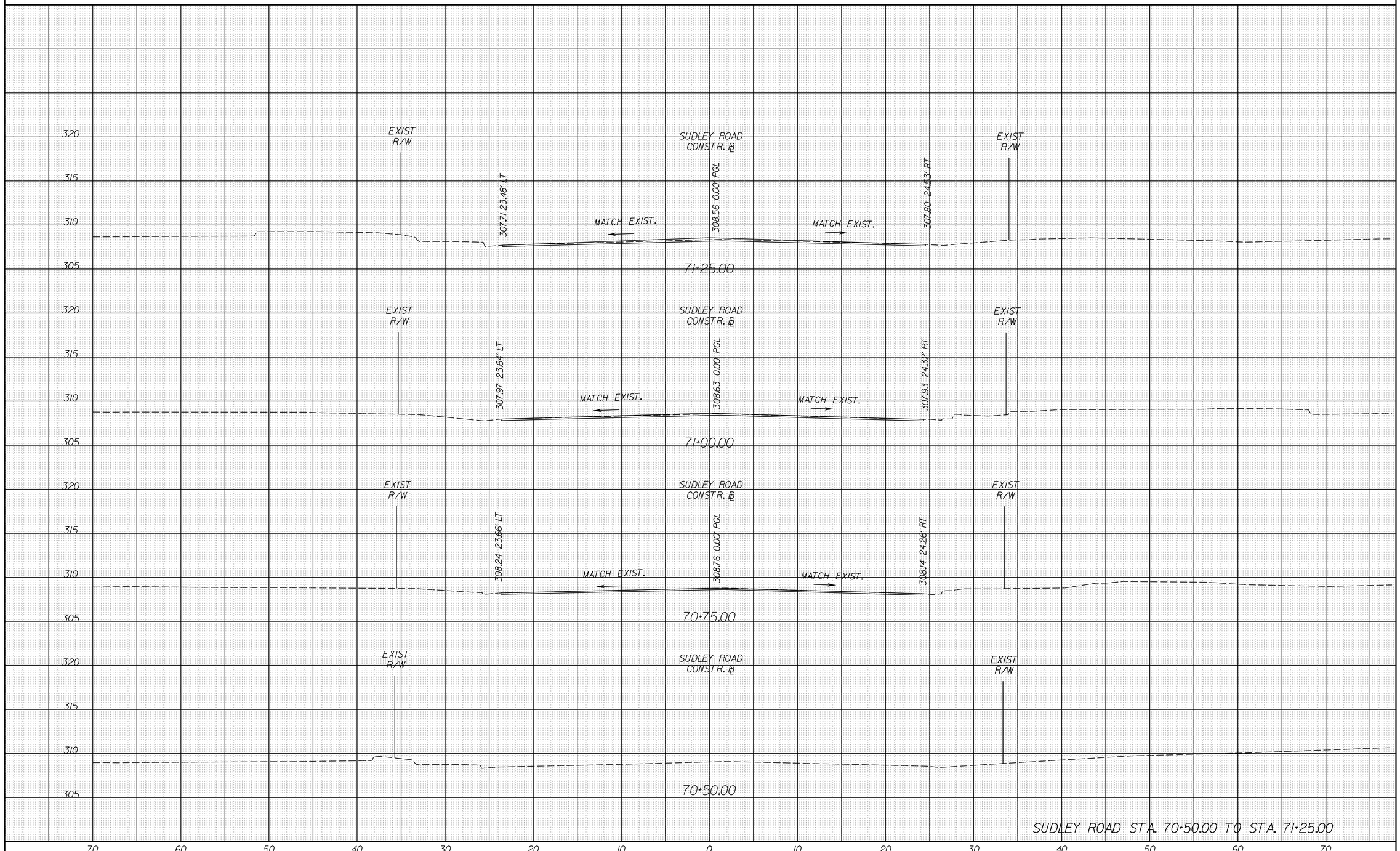
MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: DATE:

CROSS SECTIONS

SHEET
X13
SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



SUDLEY ROAD STA. 70+50.00 TO STA. 71+25.00

THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

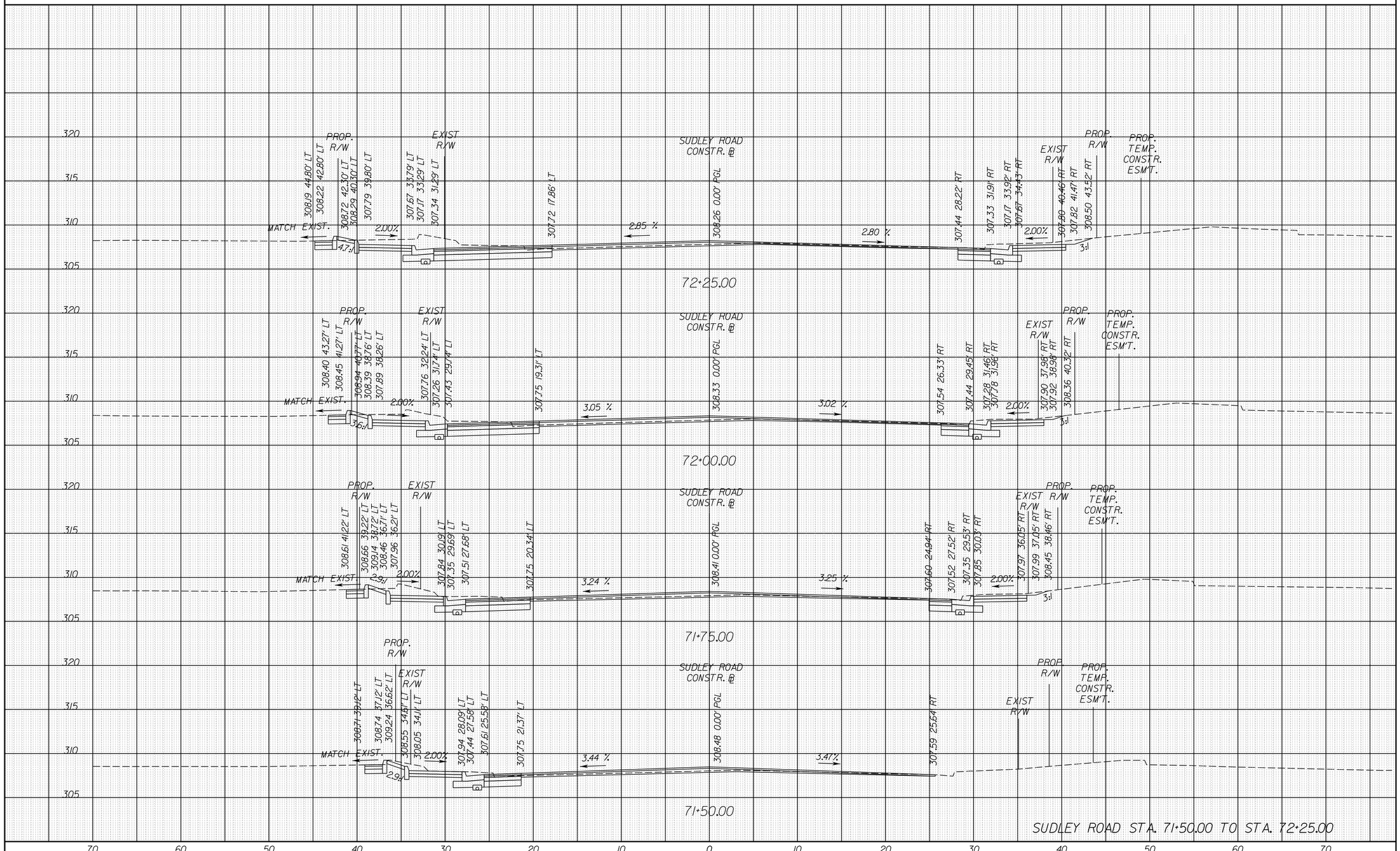
MANASSAS PROJECT NO: T-085
DATE OF PLANS ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

CROSS SECTIONS

SHEET
X14
SCALE 1"=5'

CROSS SECTIONS

SCALE 1 IN. = 5 FT



THESE PLANS ARE UNFINISHED AND UNAPPROVED AND ARE NOT TO BE USED FOR ANY TYPE OF CONSTRUCTION OR THE ACQUISITION OF RIGHT OF WAY.

60% DESIGN SUBMITTAL

SUDLEY ROAD/ CENTREVILLE ROAD ROUNDABOUT (T-085)

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO: T-085
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID: RK&K
DESIGNED BY: DVL DATE: 05/27/22
DRAWN BY: DVL DATE: 05/27/22
CHECKED BY: MJK DATE: 05/27/22
APPROVED BY: ____ DATE: ____

CROSS SECTIONS

SHEET
X15

SCALE 1"=5'